

OXFORD DTP2 HANDBOOK 2024-25



NERC AWARD

NE/S007474/1



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NERC-Oxford DTP Course Handbook 2024

The NERC DTP2 (2019-2024) award/grant number is: **NE/S007474/1**

Part I

Introduction

Welcome to the final cohort of the NERC-Oxford Doctoral Training Partnership in Environmental Research! Our ambition is to provide a world class training environment across the breadth of the environmental sciences, and to provide the support needed for you to become an independent research scientist. As a graduate student in the DTP, you will benefit from years of improvements to the programme based on the feedback of our students. You will be the lifeblood of environmental research in Oxford. Whether you decide to follow a career inside or outside academia, we hope that the skills you acquire during your DPhil will provide you with the independence and curiosity to understand and tackle whatever problems might come your way.

There are eight departments involved in the DTP in Environmental Research: Research Lab of Archaeology & the History of Art (RLAHA), Chemistry, Earth Sciences, Engineering Science, School of Geography & Environment, The Mathematical Institute, Physics and Biology. These departments span two divisions in the University: the Mathematical, Physical and Life Sciences (MPLS) Division and the Social Sciences Division. However, the DTP comes under the umbrella of the MPLS Division and therefore all DTP students are members of the MPLS Graduate School, <http://www.mpls.ox.ac.uk/learning/graduate-school>. While you will focus on the topic(s) you choose to study for your DPhil research, we hope you take the opportunity to acquire as much knowledge as you can about different areas. Please do exploit the full range of resources available to you in Oxford and beyond and make it your business to find out what everyone else is doing!

The Purpose of this Handbook

This handbook applies to students starting the course in Michaelmas term 2024. The information in this handbook may be different for students starting in other years. It provides information that is relevant to students joining the DTP in Environmental Research; it is not a handbook of Graduate Study at Oxford. There is an excellent **MPLS Graduate Handbook on the MPLS Graduate School website** <https://www.mpls.ox.ac.uk/graduate-school/information-for-postgraduate-research-students> which serves this purpose. The MPLS Handbook describes what you can and can't do as a graduate student, and how to make adjustments to your progress, for example, *suspension of status* if you become ill for a long period, or *dispensation from statutory residence* if you need to live or carry out research elsewhere in the first two years. You can find a link to all the graduate progression forms you need to make such changes on this page.

Key DTP contacts

Academic Director: Prof. David Marshall (Physics) is responsible for the development and implementation of the DTP (david.marshall@physics.ox.ac.uk).

Programme Manager: Victoria Forth (DTC) oversees administration and logistics of all aspects of the programme, (victoria.forth@env-res.ox.ac.uk).

Grants and Finance Officer: Daniel Jamali (DTC) Day to day administration of fees, stipends, expenses and grant management for the DTP (daniel.jamali@dtc.ox.ac.uk)

Management Committee: The committee is the decision-making body of the DTP. It meets in week 8 of every term, at 11am on Tuesday, and has a representative from each department:

- Research Laboratory for Archaeology and the History of Art: Greger Larson & Victoria Smith
- School of Geography & the Environment: Linda Speight & Sebastian Engaelstaedter
- Biology: Lindsay Turnbull & Joseph Bull
- Mathematical Institute: Ian Hewitt
- Earth Sciences: Jon Wade & Julie Cosmidis
- Physics: Andrew Wells & Tim Woollings
- Chemistry : tba
- Engineering Science: Wei Huang
- Student Representatives
 - Leah Tavasi (DESPNH)
 - Andrew Nicoll (PCS)
 - Zoe Brown (BEEP)
- Partner Representatives (to be confirmed)
 - Sasha Woods (Earthwatch)
 - Helen Robertson (NHM London)
 - Hugh Mortimer (RAL Space)

There is one student rep per stream. Student Reps will attend the open session of each MC meeting. Please liaise with your stream rep if there are things you would like to bring to the attention of the management committee

Doctoral Training Centre (DTC) contacts

The NERC DTP is just one of four programmes currently recruiting in the Doctoral Training Centre (DTC). The DTC can be thought of as being our Department, until such time as you move into your project department. All our administrative and finance processes fall within the wider processes of the DTC. In case of absence of DTP contacts, the two primary DTC contacts who may be able to advise you are:

Centre Manager: Sam Taylor samantha.taylor@dtc.ox.ac.uk

Centre Deputy & SABS Programme Manager Melanie Witt melanie.witt@dtc.ox.ac.uk

Key Divisional Contacts

If the DTP office is unable to resolve the issue, please consider contacting the MPLS Graduate Studies Officer, or the Social Sciences Graduate Studies contact.

MPLS Graduate Studies Officer – Mrs Helen Beauchamp, University of Oxford, MPLS Divisional Office, Graduate Office, 9 Parks Road, Oxford, OX1 3PD
Tel: 01865 (2)82584 helen.beauchamp@mpls.ox.ac.uk

MPLS Graduate Studies Assistants – Stacey Doyle & Paul Seage, University of Oxford, MPLS Divisional Office, Graduate Office, 9 Parks Road, Oxford, OX1 3PD, Tel: 01865 (2)82579,
Graduate.Studies@mpls@ox.ac.uk

The Social Sciences Division Senior Graduate Studies Assistant - Ms Mary Smith Hayes House, 75 George St, Oxford OX1 2BQ mary.smith@socsci.ox.ac.uk

Departmental Graduate Studies Officers

Archaeology

Graduate Administrator: Barbara Morris, barbara.morris@arch.ox.ac.uk,
Director of Graduate Studies (DGS) Prof Damian Robinson damian.robinson@arch.ox.ac.uk

Biology

Graduate Administrator: Heather Green
Graduate Studies Assistant: Joe Crook graduate.office@biology.ox.ac.uk
DGS: Tom Pizzari tommaso.pizzari@biology.ox.ac.uk

Handbook Forms and Procedures at: <https://www.biology.ox.ac.uk/graduate-study#collapse3106946>

Chemistry

Graduate Administrator Aga Borkowska aga.borkowska@chem.ox.ac.uk
Directors of Graduate Studies Dr Nick Green nicholas.green@chem.ox.ac.uk & Dr Martin Galpin martin.galpin@chem.ox.ac.uk

Earth Sciences -

Graduate Administrator: Ms. Claire Rylatt, graduate.studies@mpls.ox.ac.uk
DGS Professor Jon Wade jon.wade@earth.ox.ac.uk
Handbook <https://www.earth.ox.ac.uk/teaching/graduates/>

Engineering Science

Graduate Administrator Robyn Mitchell postgraduate.studies@eng.ox.ac.uk
Director of Graduate Studies (DGS) – Daniel Eakins dogs@eng.ox.ac.uk

Geography & the Environment -

Graduate Administrator: Caroline Anderson research-degrees-coordinator@ouce.ox.ac.uk
DGS Dr Alexander Vasudevan alexander.vasudevan@ouce.ox.ac.uk

Maths Institute

Graduate Administrator – Rosie Lee graduate.studies@maths.ox.ac.uk
DGS Professor Tom Sanders director-grad-studies@maths.ox.ac.uk
Handbook <https://www.maths.ox.ac.uk/members/students/postgraduate-courses/doctor-philosophy/handbooks>

Physics

Graduate Administrator: Andrea Simpson, aoppgradadmin@physics.ox.ac.uk

DGS Prof Don Grainger don.grainger@physics.ox.ac.uk

This table should help you to decide which handbook you need to consult:

Handbook	Information
DTP	Year 1 of the programme, funding, NERC requirements, minimum training requirements
MPLS	University regulations governing the DPhil degree, supervision and assessment, what to do if you encounter problems.
Departmental	Departmental procedures involving progression through the DPhil degree. e.g. Transfer of status.

The Role of the DTP

Students coming through the NERC DTP have been selected because of their demonstrated potential for becoming scientific and research leaders of the future, able to tackle the leading environmental problems that will confront society over the 21st century.

The NERC DTP is part of the Doctoral Training Centre (DTC) at Oxford and there is a shared training programme in term 1 where you can learn essential hard skills such as programming and statistics, as well as more advanced quantitative methods. In addition there is NERC-specific training in “The Earth System” which will introduce you to many of the essential concepts of Environmental Research across the streams. This programme will equip with many of the skills you will find useful in your project, regardless of what stream you are in.

We are also keen to help students gain valuable soft skills which will help them to plan and communicate their research to a varied audience. We feel it is very important for you to learn about the types of research, and methods used in disciplines other than your own. Finally we offer some advanced training courses with specific research methods.

Equality, Equity, Diversity and Inclusion

Equality, Equity, Diversity & Inclusion (EEDI) is a vital component of the DTC and all its constituent programmes. It is at the heart of everything we do. We value diversity and want every one of our students and staff to feel comfortable and that they belong. Our policies and practices are fully embedded at all levels, from leadership and staffing to student recruitment, retention, attainment, progression and wellbeing. We include training on Implicit Bias in our Induction Week and Bystander Training in our “Life Skills” course in Hilary Term. We now plan to extend this offering with additional training throughout the year in topics such as Trans-awareness, Intersectional allyship, anti-racism training and more to create an ongoing programme of education that aims to equip all our students to understand and support one another.

An important part of what drives this forward is the EEDI committee which comprises a number of student champions in areas such as Socio-economic and Class, Belief and Religion; Race and Ethnic

Diversity; Disability & Accessibility; Gender; LGBTQ+; Mature Students and Students with Caring Responsibilities; Neurodiversity; and Equality, Diversity & Inclusion. The committee holds two welfare teas each term which will follow one of the EEDI training sessions.

Spots will be opening up on the committee for 2024-25 so if you would like to join, or support any of the committee's activities please contact victoria.forth@env-res.ox.ac.uk in the first instance.

You can find the full list of current champions on the EEDI page of the DTC website. We talk more about NERC initiatives on the NERC DTP website.

<https://www.dtc.ox.ac.uk/equality-equity-diversity-inclusion>

<https://www.environmental-research.ox.ac.uk/eedi>

EEDI Internships are available to students who wish to carry out EEDI work that aligns with their own interests. These can involve taking time out from study for a term, whilst continuing to be paid a stipend, or they can be carried out as paid work done alongside the research project.

Students are invited to propose projects for internships to Garrett Morris garrett.morris@dtc.ox.ac.uk

Arriving in Oxford at the start of the course

Registration/Enrolment

Your College will officially enrol you as a student when you collect your University Card. Colleges have their own rules regarding the dates that students can collect University Cards, so contact your College Graduate Administrator to arrange a suitable time to collect your card.

You will be required to do a DSE self-assessment of your workspace when you arrive at the DTC. Details are in the building handbook, please consult this and carry out your own workspace assessment.

Payment of Stipends to students and college & tuition fees to the university.

NERC/DTP Funded students Once you are officially enrolled in the University, we can issue your first stipend payment which will be organised by BACS transfer once we have confirmed you have returned your card form. Please therefore complete your bank details on the Microsoft Office form circulated.

For Students paid from the NERC grant: Your first payment will be raised in advance of you arriving and will be paid on 25th September into your bank account (assuming we have the details). After this stipend payments come quarterly, and are paid in advance on the 1st of the quarter (nominally October, January, April and July). **Payment days are always on a Wednesday** so if the first of the month is not on a Wednesday you will be paid early, on the previous Wednesday. Therefore please set up any direct debits to go out at the start of the month so that you aren't caught short.

For students with a major College Funding Award that is managed by Student Fees & Funding (SFF) also known as Oxford Graduate Scholarships (OGS) (i.e. such as *Oxford-Radcliffe*, or *Wolfson-Marriott*), the stipend payments will also occur quarterly

Clarendon Fund Students with a Clarendon stipend will receive their stipend direct from the Clarendon fund termly (three times per year). Be aware that the summer term includes the summer vacation and is six months long so you may need to budget accordingly.

Students should not be billed directly for their University or College fees. The Colleges are responsible for collecting fees from postgraduate students; but for UKRI funded students the invoice for your fees should be sent directly to the DTP office (daniel.jamali@dtc.ox.ac.uk) so that we can pay these on your behalf. SFF funded students will have fees dealt with by SFF. **Please ensure that your College has not added your University or College fees to your college battels** (battels are college invoices for meals and other college services). If this happens, contact your College Finance Office immediately and remind them that they need to invoice the DTP office as per your funding letter. This also applies to Clarendon students whose fees are paid by the Clarendon award as Clarendon too will pay the college directly.

Oxford Terminology

There are three terms each year Michaelmas (Term 1 – Autumn), Hilary (Term 2 – Spring) and Trinity (Term 3 – Summer) Oxford undergraduate terms are 8 weeks long and the start date changes each year. You can do a quick search for Term Dates on the university website to find out when they are. <https://www.ox.ac.uk/about/facts-and-figures/dates-of-term> Graduate terms are the 8 weeks of “full” term **plus** the “vacation” that follows it. Term 1 is 3 months long, term 2 is 4 months long. Term 3 is six months long as it includes the summer vacation.

Induction Schedule

WEEK –1 Timetable The Field Trip

Monday 30 th September	Tuesday 1 st October	Wednesday 2 nd October
9.30am Royal Cars pick up at Taylorian Institute 10:00 – 10:45 Ice-breaker – David Marshall Short break 11 - 1 Mini-Conference Current Students presenting research in lightening talks – 10 mins each.	9.30am Royal Cars pick up at Taylorian Institute 10 – 11.30 Admin Induction pt2 – (Training Programme, Assignments, Proposals, Moving out to Departments) - Victoria Forth 11.30 pick up lunches from the Chalet 11.45 – 3pm. A Walk in the Woods with Nigel Fisher, Conservator of Wytham Woods <i>Andrea Estandia & Nilo Merino Recalde, Wytham Woods researchers to join</i>	9.30am Royal Cars pick up at Taylorian Institute 01865 777 333 10:00-11 Students to retrieve the weather stations. 11:00 – 1pm Drone Flight session Aryaman Gupta, Ollie Spacey, Nick Gabriel, Leah Tavasi, Prior to the session one student per group should install the app DGI fly onto your phones and ensure they are fully charged.

1-2 Lunch – Mobile pizza oven in the garden, with salads and dessert	Lunch on the walk	1-2pm Lunch (Lebanese vegan lunchboxes)
2-4 – Weather Station Building Milan Klower & Oscar Tovey Garcia 4-4.30 Place the weather stations in a variety of locations 4.30 – 5 Admin Induction pt1 - Arriving in Oxford, Introduction to the DTP Handbook VF	3pm break tea & biscuits 3.30-4.30 individual student headshots and group photo. If time - Canvas Demo	2-3pm Weather Stations analysis – Milan Klower & Oscar Tovey Garcia 3:30 – 5:00 Sandbox activity – Rebecca Colquhoun
<i>5pm Royal Cars pick up back to Oxford</i>	<i>5pm Royal Cars pick up back to Oxford</i>	<i>5pm Royal Cars pick up to The Royal Oak</i> FIELD TRIP DINNER

Week 0 – Freshers Week Timetable

Day	Time	Location	Event	Staff
Monday 7 th Morning	09:30 – 10:15 10:30 – 11:30 11:45 -12:15 12:15 – 12:25	Large Lecture Theatre, Biology Department, Mansfield Road.	Welcome to the DTC Imposter Syndrome Student Welfare EEDI Champions Welcome	David Gavaghan Tim Knowlson Gail Preston & Garrett Morris EEDI committee
Monday 7 th Afternoon	14:00 – 17:20	Meeting Room 2 (ground floor)	1-2-1 meetings with Academic Director (see timetable below)	David Marshall
Tuesday 8 th	NERC students are free either to attend Departmental Inductions on this day, (the department where you intend to carry out your research) or the DTC sessions below.			
Tuesday 8 th	09:00 – 11:00 11:15 – 12:45	DTC Seminar Room 2A-B DTC Seminar Room	Presentation Skills Intro to Career Development	Fergus Cooper Gail Preston & Esther Becker
Wednesday 9 th	All day		College Inductions	
Thursday 10 th Morning	09:30 – 13:00		College Inductions	

Thursday 10 th Afternoon	12:30 – 15:30	Meeting Room 2 (ground floor)	1-2-1 meetings with Academic Director	David Marshall
	15:30 – 16:30	Seminar 1A/B	Library Induction (new to Oxford students only)	Oliver Bridle
Friday 11th	9.30 – 10.00	DTC Seminar Room 1A/B	IT Induction	Eoin Malins & Harrison Marchant
	10:00 – 11:30	DTC Seminar Room	Implicit Bias	Hannah Ravenswood
	11:45 – 12:45		Grand Challenges	David Marshall & Victoria Forth

DTP Training Programme

The Training programme is available to view on the DTP Canvas site. <https://login.canvas.ox.ac.uk/> Undertaking the full core programme in Michaelmas Term is no longer compulsory but if you choose not to undertake any part of it, you must demonstrate that you have undertaken other training in its place, of a similar depth. In Hilary Term some Advanced training begins and this is also elective.

The Michaelmas Term 2024 NERC Timetable is on the following pages. Exact timings will be available on the Canvas site. You should assume all Maths, Programming and Statistical training runs from 9.30 to 17.30 with lectures in the morning, and problem sets in the afternoon, supported by student demonstrators. Lectures will be in-person with some remote access, and group work will be in person, with some online sessions running each week, to be confirmed at the start of term.

Choosing your Options for term 1

During your Induction you will have a short 1-2-1 meeting with the academic director who will take you through an online form to choose your module options in term 1. You will be able to choose from a number of courses offered by programmes within the DTC as well as lectures and training offered within departments, and by the MPLS Division. You have a minimum training requirement, so if you elect not to take courses in term 1 you will need to undertake training later on throughout your degree. **We do expect you to attend The Earth System course in term 1, and the Partner Sandpit (in Term 2) as these are part of your NERC cohort training.** Please see the following page for the timetable, you can view full course descriptions pages 10-12.

DTC courses are full-time in weeks 1-9 and follow this schedule

Weeks 1 – 3

1. Introduction to Programming -for those with little or no previous programming knowledge
2. Software Engineering & Sustainable Research – for those with programming experience

Weeks 4-5

1. The Earth System (NERC only)

Weeks 6-8

1. Statistics, streamed into Beginner and Intermediate. Beginner level will teach R, Intermediate assumes knowledge of R.
2. Advanced QM for NERC students who have taken a highly quantitative degree, (mostly Physics).

Overview of the term

Overview			
Michaelmas Term 2023			
Week 1 - 3	Week 4 - 5	Week 6 - 8	Week 9-10
Intro to Programming	Essential Maths	Statistics	Matlab
Software Engineering	The Earth System Introduction	Numerical Methods	

All courses run from 9.30am to 5.30pm unless otherwise stated. Lectures are held in the morning with exercises, supported by student demonstrators, in the afternoons. Where there is a seminar, or group meeting, in the afternoon students do have flexibility to leave early, or leave and come back. It's absolutely permitted (indeed encouraged) to take a break and join the wellbeing teas on days when these are being held.

Timetable in Term 1 2024.

ALL COURSES RUN FROM 9.30AM TO 5.30PM UNLESS OTHERWISE STATED
LECTURES ARE HELD IN THE MORNING WITH PROBLEM SETS SUPPORTED BY STUDENT DEMONSTRATORS IN THE AFTERNOONS
WHERE THERE IS A SEMINAR IN THE AFTERNOON STUDENTS ARE ABLE TO LEAVE THE PROBLEM SETS EARLY

Month	Day	14	15	16	17	18	
October 2022	Week 1						
		14	15	16	17	18	
	Seminar 2A/2B	Intro to Programming Eoin Malins	Intro to Programming Eoin Malins	AM only Intro to Programming Eoin Malins	Intro to Programming Eoin Malins	Intro to Programming Eoin Malins	
		Software Engineering Martin Robinson	Software Engineering Martin Robinson	AM only Software Engineering Martin Robinson	Software Engineering Martin Robinson	Software Engineering Martin Robinson	
			16:00 Wellbeing Tea				
	Week 2						
	21	22	23	24	25		
Seminar 2A/2B	Intro to Programming Eoin Malins	Intro to Programming Eoin Malins	AM only Intro to Programming Eoin Malins	Intro to Programming Eoin Malins	Intro to Programming Eoin Malins		
	Software Engineering Martin Robinson	Software Engineering Martin Robinson	AM only Software Engineering Martin Robinson	Software Engineering Martin Robinson	Software Engineering Martin Robinson		
Week 3							
	28	29	30	31	1		
Seminar 2A/2B	Intro to Programming Eoin Malins	Intro to Programming Eoin Malins	AM only Intro to Programming Eoin Malins	Intro to Programming Eoin Malins	Intro to Programming Eoin Malins		
	Software Engineering Martin Robinson	Software Engineering Martin Robinson	AM only Software Engineering Martin Robinson	Software Engineering Martin Robinson	Software Engineering Martin Robinson		
November 2024	Week 4						
	4	5	6	7	8		
	The Earth System Biodiversity	The Earth System Biodiversity		The Earth System Dynamic Earth	The Earth System Dynamic Earth		
		16:00 Wellbeing Tea					
Week 5							
	11	12	13	14	15		
	The Earth System Physical Climate System	The Earth System Physical Climate System			12.00 - 1.30 - Grand Challenges Planning Session		
Week 6							
	18	19	20	21	22		
	Statistics Essential	Statistics Essential	AM only Professional development	Statistics Essential	Statistics Essential		
	Statistics Intermediate	Statistics Intermediate		Statistics Intermediate	Statistics Intermediate		
	Numerical Methods David Marshall	Numerical Methods David Marshall		Numerical Methods David Marshall	Numerical Methods David Marshall		
Week 7							
	25	26	27	28	29		
	Statistics Essential	Statistics Essential	AM only Professional development	Statistics Essential	Statistics Essential		
	Statistics Intermediate	Statistics Intermediate		Statistics Intermediate	Statistics Intermediate		
	Numerical Methods David Marshall	Numerical Methods David Marshall		Numerical Methods David Marshall	Numerical Methods David Marshall		
December 2024	Week 8						
	2	3	4	5	6		
	Statistics Essential	Statistics Essential	AM only Professional development	Statistics Essential	Statistics Essential		
	Statistics Intermediate	Statistics Intermediate		Statistics Intermediate	Statistics Intermediate		
	Numerical Methods David Marshall	Numerical Methods David Marshall		Numerical Methods David Marshall	12.00 - 1.30 - Grand Challenges Planning Session		
		16:00 Wellbeing Tea		Numerical Methods David Marshall	Numerical Methods David Marshall		

Course Descriptions

Introduction to Programming: This module provides an introduction to programming for students with little or no programming experience and aims to instil the confidence and experience for a student to tackle most programming tasks. The topics covered include: Computer architecture; running your first "Hello World" program; typed variables, numerical calculations and comparison operators; loops; arrays; interactive programs and type conversions; functions and subroutines; file I/O; multidimensional arrays and graphics; data structures; and binary file I/O. It will be run as a combination of lectures and practical exercises culminating in a week-long individual project in the final week. (*Duration: three weeks*)

Students with well-established programming skills may be given the opportunity to work on an advanced project, or can consider undertaking the software engineering module.

Course Leader: Eoin Malins

Contact Email Address: eoin.malins@dtc.ox.ac.uk

Software Engineering and Sustainable Research: This course will introduce the essential tools and best practices needed for a sustainable approach towards software engineering in a Python programming environment. This will include an overview of programming paradigms (e.g. object orientated, functional and array-based programming), best practices in construction and design, the use of code repositories, version control, integrated development environments, automated test-driven development, debugging, continuous integration, and deployment and packaging of code-based tools. (*Duration: three weeks*)

Course Leaders: Martin Robinson and Garrett Morris

Contact Email Addresses: martin.robinson@dtc.ox.ac.uk and garrett.morris@dtc.ox.ac.uk

The Earth System

Each stream hosts a two course designed to give all students a flavour of the topics and research methodologies in that area of environmental research. The aim is to give students an overview of the Earth System from the perspective of each of the streams. It showcases the research and methods being carried out at Oxford and helps students view their own interests in relation to the broader landscape of environmental research. It is also an excellent opportunity to make contact with academics and discover methodologies and approaches that may be of use in your own project. Some students will inevitably know more in each stream course than others. This may mean that you find some elements well within your existing skill level. However please remember that as we are such a broad programme we have to include elements that cater for those with no prior knowledge in each subject area. In these cases do please consider using the time to help your fellow students who may be struggling with something that you are very familiar with

Course Leaders

PCS Stream – Helen Johnson & Tim Woollings

BEEP Stream – Joseph Bull & Lindsay Turnbull

DESPNH Stream – Jon Wade & Julie Cosmidis

Numerical Methods

Several branches of environmental research make use of computational methods to analyse data and develop/run models to understand environmental phenomena. Examples include the analysis of climate time series, propagation of seismic waves, magma dynamics in the Earth's mantle, inverse models for tracer transport in the ocean, through to comprehensive atmosphere, ocean and Earth system models used for weather and climate prediction.

This course aims to provide an introduction to mathematical tools and numerical methods that can be used to model and analyse environmental systems.

This is a rich subject, and hence this 2-week course will barely scratch the surface of what is out there. Hence, our goal is to provide an overview of selected tools and topics, thus providing an initial toolbox for developing environmental models, analysing environmental data, and the initial

background from which to develop an understanding of more complex models that may be used in your research.

A combination of focused morning lectures and practical sessions will be used to build intuition for the underlying approach, using a selection of simple examples to build insight. The practical sessions will mostly feature hands-on computational modelling, supported by mathematical analysis.

The course assumes a degree in a highly quantitative subject such as physics, geophysics, engineering, maths, etc. It is assumed that students have prior knowledge of multivariable calculus, linear algebra and have had some prior exposure to analytical methods for solving partial differential equations. It is also assumed that students have some familiarity with using a programming language and writing code. Programming will form a key part of the problem solving exercises after each lecture (most of the provided solutions will be in Python or MATLAB, but you are welcome to use a programming language of your choice). Make sure you have access to a suitable computer with either Python, MATLAB, or your favourite other language installed before the first lecture. *(Duration: two weeks, plus additional project week)*

Course leader: David Marshall

Contact Email address: david.marshall@physics.ox.ac.uk

Statistics and Data Management: It is increasingly important that researchers consider how data is acquired, analysed, presented and stored. Such an understanding not only ensures that valid and worthy science is performed and creates impact but is also a requirement of publishers and funding agencies. This course will provide an introduction to the widely used R programming language, and cover fundamental statistics for the planning, execution and reporting of scientific research including probability, hypothesis testing, statistics inference, ANOVA, regression analysis, multivariate methods, mixed effect models, alternative methods and reproducibility. The use of machine learning (ML) and artificial intelligence (AI) approaches is becoming increasingly important across a wide range of disciplines. We introduce core concepts and methods in ML and AI including flexible regression, cross-validation and multiple testing. We will also discuss best practice in scientific data management and curation, and systems to help researchers curate, manage and publish experiments. Project work will provide experience of processing, analysing and curating experimental data to produce 'publication ready' figures and text. *(Duration: three weeks)*

Course Leader: Gail Preston

Contact Email Address: gail.preston@dtc.ox.ac.uk

MATLAB: This one-week course will give you an introduction to using MATLAB for plotting, data analysis and modelling. It is divided up into 6 units, covering the following topics:

Unit 1: Basic introduction to MATLAB

Unit 2: Data analysis, image analysis and basic statistics in MATLAB

Course Leader: Fergus Cooper

Contact Email Address: fergus.cooper@linacre.ox.ac.uk

Example Timetable for Term 2

	Week -1				
	1	2	3	4	5
		9 - 5 Life Skills	9 - 5 Life Skills	9 - 5 Life Skills	9 - 5 Life Skills
					Application Deadline
	Week 0				
	8	9	10	11	12
	Week 1				
January	15	16	17	18	19
	12 - 7pm Industrial Sandpit DTC all four seminar rooms	9.30 to 7pm Industrial Sandpit DTC all four seminar rooms			Submit Research Questions/Abstracts on
	Week 2				
	22	23	24	25	26
	Writing Skills TBC	10-12 tbc Proposal Writing 1 Conall MacNiocaill	AM Environmental Policy Workshop - Charles Godfray with John Krebs, Claire Craig Oxford Martin School 10.30 - 12.30 Designing a Research Project - Greger Larson DTC Seminar 1B	1 - 4pm Foundations for a Good D.Phil Molly Grace, Seminar 1B	10 - 1 Bibliographic Skills - Oliver Br
	Week 3				
February	29	30	31	1	2
	9:30 - 17:00 ATC - Introductory GIS David Benz Seminar 1B	9:30 - 17:00 ATC - Introductory GIS David Benz Seminar 1B		??? 09:30- 12:30 Scientific Chronology Vicki Smith & Rachel Wood Archaeology	
	Week 4				
	5	6	7	8	9
	10:00 - 12:00 ATC Atmospheric Physics in person Philip Stier Seminar 1B		10:00 - 12:00 ATC Atmospheric Physics in person Philip Stier Seminar 1B	10:00 - 12:00 ATC Atmospheric Physics in person Philip Stier Seminar 1B	10:00 - 12:00 ATC Atmospheric Physics in person Philip Stier Seminar 1B
	Week 5				
	12	13	14	15	16
		10-12 tbc Proposal Writing 2 Conall MacNiocaill Seminar 1B	Fieldwork Planning & Safety 10-12 1-3 Neil Carveth DTC Seminar Room 2B	Outdoor First Aid Level 2 Seminar 1A/B	Outdoor First Aid Level 2 Seminar 1A/B
	Week 6				
	19	20	21	22	23
	Week 7				
March	26	27	28	29	1
	Week 8				
	4	5	6	7	8
		10-12 tbc Proposal Writing 3 Conall MacNiocaill Seminar 1B			Spring Fling

Space & Equipment

During the first year of your D.Phil., you will be undertaking chosen elements of the core training programme and developing your D.Phil. research proposal. Training will be carried out both in person and remotely, you need to check the details for each course on Canvas. Due to numbers, it's not possible for everyone to attend in-person for some courses so hybrid teaching will be available. In Hilary term training offered will be less intensive than that in Michaelmas Term and you will be able to focus more on developing your research project. You will start to be based more in your department from Hilary term onwards. Once you have submitted your proposal in week 1 of Trinity Term you can start working on your project while the Management Committee assesses your proposal in readiness for your transfer to departments. At this point you can start to access your RTSG (Research and Training Support Grant).

The IT Support Team is located at 1-4 Keble Road. They are IT Manager Eoin Malins eoin.malins@dtc.ox.ac.uk and IT Officer Harrison Marchant harrison.marchant@dtc.ox.ac.uk.

You will be provided with a DTP laptop which you can collect from Victoria, in the DTC building, in Freshers week. This will be handed back by the following August by which time you will have decided what type of computer you need in order to be able to carry out your research project. It will then be refurbished and handed to the next intake, so **please take care of it and use the case we provide to protect it**. The DTC IT Support team will provide you with support for your laptop throughout the year. We strongly recommend that you purchase a laptop through the university when you transfer out to your department, rather than using your personal laptop during your research project. A personal laptop is not eligible to use university licensed software or to receive IT support from university sources. We cannot be held responsible for replacing a personally owned laptop if you have used one throughout your project, and it dies towards the end. You should be given help in obtaining a computer by the department you are moving out to. If this is not possible please let the DTP office know. If you need additional funds for specific computing requirements you can access your RTSG after completing a particular form. Please see the RTSG guidance for details.

Once you are in your new department, you can maintain your links to the DTP in a number of ways: ongoing (core and advanced) training, research seminars, and social events. The DTP will continue to manage your funding award from NERC, your RTSG will be held by your department but we will monitor it. As you progress through the programme, you will have opportunities to teach.

Student supervision during year 1

DTP students can have multiple sources of supervision. In term 1 standard DTP students (i.e. those not recruited to a confirmed project) are assigned to a relevant Management committee member until their project supervisor is confirmed. CASE and departmentally funded students already have a project supervisor but all students have a Management committee member assigned to them from their likely department for the purpose of reviewing their assignments and conducting the transfer out to the department. Please let Victoria know if we have got your proposed department wrong here as we will need to change your Term 1 supervisor.

Contact Details for Management Committee members

Archaeology	Victoria Smith	victoria.smith@arch.ox.ac.uk
Archaeology	Greger Larson	greger.larson@arch.ox.ac.uk
Biology	Joseph Bull	joseph.bull@biology.ox.ac.uk
Biology	Lindsay Turnbull	lindsay.turnbull@biology.ox.ac.uk
Earth Sciences	Julie Cosmidis	julie.cosmidis@earth.ox.ac.uk
Earth Sciences	Jon Wade	jon.wade@earth.ox.ac.uk
Geography	Sebastian Engelstaedter	sebastian.engelstaedter@ouce.ox.ac.uk

Physics	Tim Woollings	tim.woollings@physics.ox.ac.uk
Physics	David Marshall	david.marshall@physics.ox.ac.uk

Other sources of support

Students can also seek advice and support from the Academic Director, the Course Director, the Programme Manager, their College advisor, the DGS of their project department, and – most importantly – other research advisor(s). Once students move to their department, the DPhil supervisor should ensure that an appropriate team of advisors is in place to support the student while they undertake their proposed research. The DPhil supervisor will also oversee (and needs to approve) your registration for advanced training courses, and approve all spending from your RTSG grant. **If at any point you feel that you are not progressing, or being supported as you should be please see the Programme Manager, Victoria Forth.**

Supervision & Project Development

The majority of DTP students are admitted to one of the three streams of the DTP, and will develop their research project during their first and second terms in collaboration with their chosen supervisor. The remainder are admitted direct to a research project (CASE, NPIF, Collaborative) however regardless of this all students follow the same progression. Many students know when they start what and who they will be working with. If you do not yet have a supervisor and project in mind, please keep in close contact with David Marshall and the DTP office so that we can assist you and ensure that you are matched with an appropriate supervisor.

In term 1, hard skills courses are offered, in mathematics, statistics, computer programming. You are encouraged to take these; if however they are not of any relevance to your research area, or you are already skilled in those areas, you can choose to take other courses instead, either now or at a later date in your project.

The DTP website provides details about the range of research questions that potential supervisors (both within and beyond Oxford) are keen to work on with DTP students. We recommend that you read through this as you consider which supervisor you might wish to work with. There will also be a networking session featuring supervisors keen to recruit a student, which may give you some thoughts about how to develop your project, and who is available to supervise.

Students who are fully funded by the DTP have the freedom to choose their project supervisors and research direction. Students should be aware that if their proposed supervisor has several interested students, or is already at capacity, they may need to keep in mind an alternative research supervisor that could oversee their proposed work, whether in the same or a different research group. Again, the DTP website is an important tool to use while navigating this process.

By Friday week 1 of HT – 19th January 2024 students will submit *either*

a list of potential research questions and preferred supervisors (all students must have two or more supervisors)

or

an abstract that outlines their intended research project and supervisors

These should be submitted by email to your Management Committee member. They will review the assignment. You will contact them to arrange a meeting with them to discuss the assignment and get feedback and guidance. They will record this in your termly report.

You can work on your proposals in Michaelmas and Hilary terms, and you can use this time to make contact with potential supervisors to discuss ideas. The proposal should be at most 3 pages, identify the intended supervisory team and must include: Background, Objectives, Methods, Timetable and Budget. **A full research proposal must be submitted by 5pm on Friday week 1 in Trinity Term, Friday 2nd May 2025.** The Management Committee will evaluate all proposals to ensure that projects are feasible within the given time and budgetary constraints, can be appropriately supervised and implemented in Oxford (in conjunction with external partners where appropriate) before granting permission to start on the DPhil project. Students are able to revise and resubmit proposals up until the end of week 8 Trinity Term.

Process for approving project proposals and transferring to departments.

Students will submit the research proposal consisting of a 2 page proposal plus a 1 page budget and proposed time line to the DTP via email to their MC member by **Friday of week 1 in Trinity Term.** The programme manager must be copied in. Students should draft proposals in collaboration with a selected partner or partners and should aim to have their project converted to CASE where feasible. We have a 25% requirement for CASE conversion. Supervisors can help with this process and the DTP office can also offer advice.

There is a formal process in place for evaluating the proposal before students will be transferred from the DTP to their host Department.

1. **Please note: we require students to have at least one co-supervisor.**
2. **Submit your proposal to your Management committee** member via email copying in the DTP admin staff (Victoria Forth). Each proposal will be assessed by a management committee member and another academic (but not the supervisor) from the chosen department.
3. **The Management committee member is responsible for identifying the department assessor.** Once the proposal has been reviewed, they will contact the student to arrange a meeting between the student, MC member and departmental assessor. It is also possible that the Departmental Director of Graduate Studies may attend the meeting if the department wishes it. The aim of these meetings is to provide students with constructive feedback that will help them to improve their research plan. At the meeting, the student will be asked to give a ten minute presentation on their proposed project, and this will be followed by up to 20 minutes of discussion.

4. **The student will be advised if any changes or improvements are required** and given a time limit to complete them.
5. **If no further changes are required for the proposal**, then the MC member and the second departmental assessor will sign the formal agreement for transferring students to the department (attached).
6. **The form should be prepared by the student in advance of the meeting** and a brought to the meeting as hard copy ready for signature by the MC member. Signatures should then be obtained from the supervisor and departmental DGS by the student. The form should be sent to the DTP office for signing off as this will trigger processes within the office including those that will enable students to access their RTSG.

7.

This formal process will take place up to 2-months after submission; therefore, students are allowed to begin initial work on their project before the formal transfer takes place

RTSG funds will be available from the point of proposal submission. Please see RTSG guidance for details of how to access it. (Appendix A, page 26)

CASE Projects

NERC requires that we convert 25% of our projects to CASE. A CASE project is one where a partner contributes a minimum of £1000 per year to the student, usually towards RTSG, and also hosts the student at the partner institution for a period of time between 3 and 18 months. This period does not have to be in one go but can be split up into shorter periods. There is more information about the CASE scheme on the NERC website here <https://www.ukri.org/what-we-offer/developing-people-and-skills/nerc/nerc-studentships/directed-training/nerc-case-studentships/>

It's usually the supervisor who will be the primary mover in negotiating and securing a CASE partner, but we have had students who have identified CASE partners successfully as well. Please discuss the idea of converting your project to CASE with your supervisor while you are developing your project.

Graduate Progression - The stages of a D.Phil

1. **PRS** You will begin as a Probationary Research Student (PRS) and you will retain this status for up to six terms, until you have successfully transferred your status to D.Phil student. You cannot call yourself a D.Phil student while you are a PRS.

2. **Transfer of Status** Each department has its own rules regarding the transfer of status to DPhil student. This process typically involves the submission of a full thesis proposal (sometimes including completed chapters), a public presentation, and evaluation by faculty not involved in the supervision of the research project. Typically in MPLS, PRS students complete their Transfer of Status by the end of term 4, but departments are aware that DTP students – who join the department one or two terms after non-DTP students – may require more time to achieve this. The absolute latest point at which DTP students can complete the Transfer is by the end of term 6. If transfer of status is unsuccessful the opportunity to re-attempt is allowed and 1 further term is permitted. If students do not transfer status within the approved time-frame then they are unable to complete their degree.

3. Confirmation of Status During your 9th term you will go through another process called Confirmation of Status. This confirms that you are on track to submit your thesis within the maximum of 48 months required by NERC. Again, each Department has their own procedures which are described in their handbook, but all are governed by the university's over-arching regulations and you can find these in the MPLS Graduate Handbook.

We expect you to submit your thesis by the end of your 11th term (or 3.5 years whichever is sooner). If you need more time then you can apply for an extension for a further term (Trinity term is a 6 month term). At 12 terms you must submit. Failure to do so will jeopardise future funding for this programme and may cost future students the opportunity to carry out a D.Phil.

Once you have submitted you will undergo examination by viva, and you must tell us your viva date once this is arranged, as NERC will want to know this, and the outcome.

Research Partners

The DTP has a number of partnerships with research organisations, government agencies, non-governmental organisations and industry. These Partners bring important perspectives to the DTP, in helping to define the problems that will need to be addressed by Environmental Researchers of the future, and by offering insights into the world beyond the laboratory. Student engagement with our Partners will help students to maximise the societal and scientific impact of their D.Phil. research and will provide excellent opportunities for students during and beyond their degree. There are a number of ways that our partners wish to engage with DTP students and these are laid out in the table on the next page.

Each partner has a page on the DTP website which gives a little information about their research areas and the ways in which they have asked to be involved. It is worth looking at these pages to see which partners might be a good match for your proposed project. Partners may help with project development, and in some cases may even wish to "CASE" projects that are of direct benefit to them. A CASE award involves additional funds to the student as well as spending some time with the CASE partner either as part of the project, or as an internship. The DTP has a target of 25% for converting studentships to CASE, but all collaborations are very valuable.

List of DTP Partners

Partner	Co-Supervision	CASE studentships	Access to Facilities	Access to Data	Access to Models	Access to Study Sites	Training Courses	Expert Advice	Work Placements	Field Work Support	Travel Grants	Public Engagement Opportunities
AFRY	X	X	X									
BGS	X		X				X		X			
CEH	X		X			X						
Earthwatch	X		X	X		X	X	X		X		X
Elsevier							X		X		X	
ECMWF	X			X	X							
ESA	X											
FEM	X		X	X		X	X					
IIED	X	X										
Kew	X		X	X				X				
Met Office	X	X										
NCAS	X	X					X		X			
NCEO	X		X		X							
NOC	X			X	X							
Natural England	X	X		X		X			X			
NHM, London	X		X	X				X				X
Operation Wallacea	X	X		X		X		X		X	X	X
Rutherford Appleton Lab	X	X	X									
Save the Elephants	X	X	X			X		X				
Sylva Foundation	X		X	X		X		X	X	X		X
ZSL	X		X	X	X			X				

BGS = British Geological Survey; ECMWF = European Centre for Medium Range Weather Forecasting; ESA = European Space Agency; FEM = Fondazione Edmund Mach IIED = International Institute for Environment and Development NCAS = National Centre for Atmospheric Science; NCEO = National Centre for Earth Observation; NOC = National Oceanography Centre; NHM = Natural History Museum.

Part II

Key Dates

Assignment Deadlines (you can submit earlier if you are ready)

- 1) **Either** Submission of Research Questions & potential supervisors **OR** Submission of Abstract midday **Friday week 1 of HT – 24th January 2025**
- 2) Submission of Research Proposal midday **Friday week 1 in Trinity Term, 2nd May 2025**
- 3) Student Conference & End-of-year party – **23rd June 2025**

DTP Training Programme

The Training programme is available to view on the DTP Canvas site. <https://login.canvas.ox.ac.uk/>
Undertaking the full core programme in Michaelmas Term is no longer compulsory but if you choose not to undertake any part of it, you must demonstrate that you have undertaken other training in its place, of a similar depth. In Hilary Term some Advanced training begins and this is also elective.

The Michaelmas Term 2022 NERC Timetable is on page 10. Exact timings will be available on the Canvas site. You should assume all Maths, Programming and Statistical training runs from 9.30am to 5.30pm with lectures in the morning, and problem sets in the afternoon, supported by student demonstrators. Lectures will be in-person with some remote access, and group work will be in person, with some online sessions running each week, to be confirmed at the start of term.

In your 1-2-1 meeting with the Academic Director, you will run through an online form and make your module choices where options in other programmes exist. Please see the following pages for brief course descriptions.

Minimum Training Requirements

The minimum requirement for DTP students, is that they **must attend training courses equating to six months of study-time throughout their 4 year degree** (six weeks of training per year on average). As part of this they **must attend six Advanced courses** during the course of their degree, These can include external training, specialist one to one training received within a department or Summer Schools, and courses run by other institutions. If unsure please check with the DTP office. The Michaelmas Term 2023 core timetable is as follows: (some amendments may be necessary) [green = NERC only]

Advanced Modules

In addition to the chosen core modules, every student is required to take at least six advanced modules in line with their research interests. Students can choose from the modules below or undertake additional courses offered by the University or other institutions, as appropriate.

Please note that some of the modules listed below run concurrently with an alternate module and it may not be possible to take all possible module combinations in a single year. If necessary, students can take additional modules in later years.

Bioinformatics: This course provides an introduction to concepts, tools and techniques in bioinformatics and phylogenetics. The course is primarily targeted at students from a biosciences background and assumes a basic level of familiarity with computational tools and programming, as provided by the Programming course. The first week comprises three core training modules covering: sequence databases, sequence alignments, phylogenetics, high-throughput sequencing technologies (both short- and long-read) and comparative genomics. Students will have the opportunity to work in small groups on a chosen scientific paper relevant to the course and present their findings back to the group at the end of week one. In the second week students will choose a research problem (or propose their own) and form small teams to develop a solution in the spirit of a hackathon. This will begin with an advanced training day offering a choice of more in-depth sessions relevant to hackathon projects. Each team will then work collaboratively on their chosen problem and then present their solution back to the group as a whole on the final Friday. (*Duration: two weeks*)

Course Leader: Liam Shaw

Contact Email Address: liam.shaw@zoo.ox.ac.uk

Synthetic Biology: This course will introduce many widely used techniques for mathematical modelling, simulation, and analysis of biological systems. The course is targeted at graduate students from a broad range of backgrounds and requires minimal prior experience in mathematics or programming. During the module you will be introduced to common mathematical/computational tools and techniques used for design, engineering, and analysis of biological systems, with applications ranging from gene networks to large-scale ecological systems. Each topic will be taught with a combination of lectures, workshops, and individual problem-solving exercises.

Specific topics covered include: fundamentals of MATLAB programming, chemical reaction network modelling, flux balance analysis, ordinary differential equation (ODE) models, agent-based modelling, ecological networks, biophysical modelling, model fitting and identification, stochastic modelling, fundamentals of optimisation and control in biology. Each topic will be discussed in the context of its applications in current research, with the ultimate goal being to equip attendees with a toolbox of methods that they can apply widely in their own research. (*Duration: one week, HT week 1*)

Course Leader: Harrison Steel

Contact Email Address: harrison.steel@eng.ox.ac.uk

Microscopy and Image Analysis: This course is aimed at students with an interest in cellular biology and microscopy. The course provides an overview about the theoretical and practical aspects of brightfield, fluorescence and electron microscopy and their varied implementations, as well as gain an appreciation of instrumentation adjustment and design. Students will also receive hands-on training in image analysis and carry out a group-based project. (*Duration: two weeks, March 2022*)

Course Leader: Esther Becker

Contact Email Address: esther.becker@dtc.ox.ac.uk

Introduction to Experimental Bioscience: This course is intended for students with a background in physical sciences, who have little experience with wet-lab biological and/or biochemical research. The course provides a hands-on introduction to experimental techniques used in molecular and cellular biology, including DNA and protein extractions, gel electrophoresis and protein characterisation methods. The course will offer insight into the biological processes underlying the different techniques, training in experimental record-keeping, intellectual property, insight into the factors affecting experimental design, data generation and analysis, bioinformatics and data presentation. This is primarily a lab-based course and students are expected to maintain a high-quality lab book throughout the module (*Duration: one or two weeks*)

Course Leaders: Gail Preston and Esther Becker

Contact Email Addresses: gail.preston@dtc.ox.ac.uk and esther.becker@dtc.ox.ac.uk

Mathematical Model Building in Biomedicine: Introduction to the theoretical approaches used to model complex systems in health and disease. Understanding how mathematical and computational models are developed, the techniques that are used for their solution, and in interpreting results. Models of subcellular processes (e.g. the cell cycle and metabolism) and epidemics. Models of more complex systems (e.g. pattern formation, disease spread, biological networks). (*Duration: two weeks, 6-7 MT*)

Course Leader: Ruth Baker

Contact Email Address: ruth.baker@maths.ox.ac.uk

Structural Approaches to Drug Discovery: This course will introduce techniques used to explore macromolecular structure. Topics will include: structure determination, visualisation, classification and validation; protein structure prediction and folding; protein-protein, protein-ligand and protein-drug interactions; small molecule drug discovery; uses of AI. Will include a visit to Diamond and laboratory work at the Structural Genomics Consortium. (*Duration: two weeks*)

Course Leader: Charlotte Deane

Contact email address: deane@stats.ox.ac.uk

Modelling and Scientific Computing: This course covers the numerical solution of mathematical models in biology, including ordinary differential equations, stochastic models, differentiation, optimisation and inverse problems, finite differences for partial differential equations, general linear

models, Fourier analysis, and linear algebra. Theory as well as practical tools and libraries in Python will be presented. (*Duration: two weeks, HT*)

Course Leader: Martin Robinson

Contact Email Address: martin.robinson@cs.ox.ac.uk

Data Science: This module will introduce key concepts in data science, statistics and machine learning. Statistical methods will include probability theory, statistical inference and multivariate methods. Methods of data management, storage and curation will be covered and will include relational databases, challenges associated with data security, curation and sharing. Data visualization of large and high-dimensional datasets will be covered. Classical and modern machine learning methods for supervised and unsupervised problems will also be covered. Prerequisites: an understanding of Python and R. (*Duration: two weeks, HT*)

Course Leader: Garrett M Morris

Contact Email Address: garrett.morris@dtc.ox.ac.uk

Quantitative Chemical Biology: This module provides an overview of a range of quantitative chemical biology techniques, tools, and statistical analyses used to study and manipulate biological systems. (*Duration: two weeks*)

Course Leader: Akane Kawamura

Contact Email Address: akane.kawamura@chem.ox.ac.uk

Computational Approaches for Chemical Biology: This module is delivered in collaboration with our industrial collaborators and provides an overview of computational techniques, including coding and machine learning applied to biological questions. The module comprises a mix of lectures and activities-based workshops. (*Duration: one week*)

Course Leader: Stuart Conway and Angela Russell

Contact Email Address: stuart.conway@chem.ox.ac.uk and angela.russell@chem.ox.ac.uk

Contemporary Probe and Drug Discovery: With a mixture of lectures and workshop activities, this module focuses on the principles and modern practise of probe and drug discovery and development. The first week is devoted to the fundamentals of medicinal chemistry and how they impact the process of probe and drug discovery. The second week explores more advanced concepts with case studies focusing on key emerging areas in drug discovery, generating thought-provoking ideas and activities. Some material and interactive sessions are delivered by scientists from our industrial collaborators including GSK and Merck. (*Duration: two weeks*).

Course Leader: Angela Russell and Stuart Conway

Contact Email Address: angela.russell@chem.ox.ac.uk and stuart.conway@chem.ox.ac.uk

Smart Modelling Strategies

This course aims at teaching PhD Students the basics of modelling strategies.

This four-day course aims at teaching PhD students the basics of modelling strategies. PhD students are taught that for "count data" a Poisson model must be used. However, once the method to analyse the data is set, there are almost infinite possibilities as to how one might parametrise a model (i.e. how to include the available predictors and which interactions to include). This latter step is not taught in statistics lectures and searching on Google does not help much either. Model parametrisation is the step where most PhD students 1) struggle the most (and waste time) and b) where the largest potential of most analysis is lost (waste of resources).

In this course we look at how to parametrise a model. Once the method of data analysis is chosen (e.g. logistic regression), in what form should the available predictors be incorporated into the model. In other words, how should the model equation look like?

Course objectives:

1. students learn what modelling strategies are and why it is important to use them
2. students learn a structured way to approach model parametrisation
3. students find a convenient model parametrisation for their own data set
4. students learn modelling strategies from the other cases discussed in class

Ideally students should come with a data set that is ready to be used to fit models, (i.e. data cleaning and a preliminary graphical analysis already done). Students should already have in mind a method to use, (in this case very likely a mixed effects model.) (*Duration: two days*)

Course leader: Matteo Tanadini

Contact Email address: matteo.tanadini@gmail.com

Intermediate GIS techniques

Spatial data analysis is an important component of many research projects. This two-day course is designed to provide an understanding of some more advanced methods for working with spatial data in a Geographic Information System. The course is aimed at students who attended the DTP session on introductory GIS & remote sensing or who already have a working familiarity with GIS.

Instruction will take place over Zoom, and will comprise short lectures and longer practical exercises. The first day's exercises will be conducted in QGIS, while the second day focuses on ArcGIS.

Instructions on how to download and install both software packages will be provided before the course. (*Duration: two days*)

Course leader: David Benz

Contact Email Address: David.benz@zoo.ox.ac.uk

Other Sources of Training

Departmental Courses – please visit the departmental websites to find out current training opportunities offered by departments.

[Mathematical Institute](#) Lecture List - <https://www.maths.ox.ac.uk/members/students/lecture-lists>

The Department of Continuing Education offers Professional Development courses (primarily taught online) that may be of interest to DTP students, including:

- Ecological Survey Techniques
- International Wildlife Conservation Practice
- Environmental Management

The full list of courses can be found here:

<https://www.conted.ox.ac.uk/about/continuing-professional-development> Registration is via the Department of Continuing Education and – in most cases – will require a fee to be paid (either from your RTSG account or from College funds).

DTP Students are also able to enrol in courses being offered by our Research Partners, these are not free of charge:

National Centre for Atmospheric Science: <https://www.ncas.ac.uk/index.php/en/>

British Geological Survey: <http://www.bgs.ac.uk/>

Birdlife: <http://www.birdlife.org/>

European Space Agency: <http://www.esa.int/Education/Courses>

Centre for Ecology and Hydrology <https://www.ceh.ac.uk/training>

Natural History Museum <https://www.nhm.ac.uk/our-science/courses-and-students.html>

Check the Researcher Training Tool regularly as it is will be continuously updated with new advanced research methods courses offered by the DTP and other Departments in the University as they become available.

Bespoke training courses can also be developed with instructors according to student interests and demand. To propose a course, students should provide a description of their proposed course, including the course objectives, duration and proposed course leader to Elizabeth Jeffers, the DTP Course Director.

MPLS Division– Enterprise Training <https://www.mpls.ox.ac.uk/training/mpls-training/our-courses/mpls-enterprise-courses>

Post Graduate Training - <https://www.mpls.ox.ac.uk/training/courses?tab=pgr>

Personal & Professional Development Courses

Life Skills for Scientists: The Chemistry in Cells programme of the DTC offers a one-week “Life Skills” course in week 0 of Hilary Term which is open to all DTC students.

This module provides training in transferable skills, resilience (including dynamics of working in multidisciplinary labs, managing complex relationships), equity, equality diversity & inclusion, EEDI), communicating your science and public engagement, and exploration into diverse career opportunities. This module includes sessions delivered by representatives who work in different careers (e.g. publishing, IP, teaching, industrial research, policy, academia). (Duration: one week).

The MPLS Course Programme for Graduate Students offers a wide range of short, intensive training courses for professional and personal development. Further details for the courses are available on the MPLS Training webpage (<https://www.mpls.ox.ac.uk/training/course-programme-for-graduate-students>) and registration is conducted via the Researcher Training Tool. Some courses that may be of particular interest to DTP students include the following:

Teacher Training: The MPLS Division the following courses aimed at developing best practices in higher education teaching:

- Preparing for Learning & Teaching at Oxford;
- Developing Learning & Teaching at Oxford;
- Teaching & Learning: Science, not Magic

Get That Job: Get that Job provides information about a variety of career options, preparing your CV, interview requirements, and aims to deliver information, tips and examples of successful approaches to posts within and outside academia.

Internships

Work Placement with Research Partners: DTP students can arrange a work placement programme with a variety of DTP partners (anytime after the first year). This can range from a week-long job shadowing to a 3-month internship (e.g. British Ecological Society Policy Internship or an industry placement). See the partner pages on the DTP website for more information about what is on offer from each partner and for contact details www.environmental-research.ox.ac.uk/partners. You can either contact partners yourself directly, or contact the Programme Manager to initiate contact. If you do establish a partner relationship, please make the Programme Manager aware of it.

Internships:

Internships are a valuable way of getting experience or working in a non-academic sector, and learning skills and concepts that give added value to your PhD. They are encouraged by NERC who run a Policy Internships scheme, allowing students to work for 3 months for a government agency such as DEFRA or the House of Lords whilst still being paid the UKRI stipend, plus a budget for travel and expenses of around £2,500. The studentship funding is then extended by three months at the to account for this. This is supported by the NERC grant. We can support 2 students per year to undertake UKRI internships.

You are also free to arrange your own internships if the opportunity arises, In this case we strongly advise that your host pays you during the course of the internship as we may not be able to extend your funding for a non UKRI internship. We also are unlikely to be able to provide an extended stipend for a non-UKRI unpaid internship.

Ideally you will be able to move your submission date on by 3 months (the usual length of time of an internship) so that you do not have to absorb the internship into your project time. There are two ways you can achieve this: 1. by suspending status for the period of the internship 2. by applying for an extension.

When do you need to suspend status?

You do need to suspend status in advance if you take up a paid internship with an external organisation (not a UKRI internship), as your stipend will need to be stopped during this period. Your submission date will then automatically be moved on by 1 term, and your stipend halted during the period you are being paid from another source. This will ensure that you have funding for the additional period at the end. The GSO17 form you will complete asks whether you have applied to your funding body for approval. For this purpose, the DTP is the funding body and you should contact the programme manager to let them know of your plans. The forms can be found at this link:

<https://www.ox.ac.uk/students/academic/guidance/graduate/progression/exceptional?wssl=1>

Suspending status means your student status will be deactivated during this time and you will not have access to university services such as the counselling service until you return from your suspension. It is not possible to suspend for less than 1 term at a time. If your current submission date is at the end of a Trinity term (so in early October) then suspending status for 1 term will mean your new submission date is in early January. A second suspension will result in an end of Hilary submission date. a third suspension will move the date on to the end of Trinity again (this will be a six month move). In this case it is very likely that your new funding end date will not match your university submission date, it will probably be at the end of June.

When should you apply for an extension of time?

You do not need to suspend status if you take up a UKRI internship as you will be funded throughout by the research grant, and your funding will be extended for 3 months at the end. In this case you will apply for an extension usually of 1 term so that your submission date is moved on.

What if you arrange an internship which is unpaid?

In this case, you can continue to receive your stipend, but you would not be able to get additional funding so we would recommend that you do not suspend status. If you are aiming to submit by 3.5 years, then you do still have an additional 6 months of funding available to you and so you should aim to absorb the internship into the total 48 months available to you.

Can you do an internship abroad? Yes, but we would expect your host to support your travel and accommodation costs and, ideally, to pay you.

Can you do an EEDI internship? Yes, but funding for this would be through a different source. The DTC has a separate funding stream for EEDI internships and you can apply for this by contacting Garrett.Morris@dtc.ox.ac.uk

Can you do a project at another uni or research institute as an internship, or take up an unrelated fieldwork opportunity and treat it as an internship? No, this would not be viewed as an eligible internship opportunity as it's still within academia.

How many internships can you do during your PhD? This is not set in policy but it would be highly unusual to do more than two internships, and one is standard.

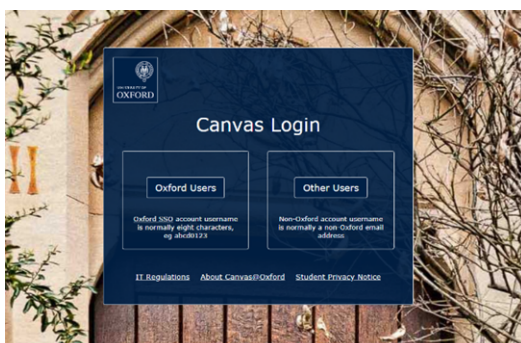
Canvas

Canvas is an University's online e-learning site. The purpose of our canvas site is to give you a range of information about the training, this includes

- When and where your training is taking place each day
- Who is leading it
- What you can expect to learn in each course
- Any resources you need for the training

To log into Canvas use the url <https://login.canvas.ox.ac.uk/>

You will get the canvas login screen, enter your single sign-on and password



This is the DTP Programme's dashboard. There is an icon for each main course. Click on the icons to access the lesson pages. You can see a menu on the left with buttons that lead you to different places. If you click on a course, you will be taken to the lesson pages for that course.

University of OXFORD

Dashboard

- Account
- Dashboard
- Courses
- Calendar
- Inbox
- Help

Environmental Research (NERC D... R8_9A1 Environmental Resear... 2019-20 Academic Year

A Successful DPhil A Successful DPhil 2019-20 Academic Year

Communicating Research Communicating Research 2019-20 Academic Year

Field Course Field Course 2019-20 Academic Year

Graduate Research Seminars Graduate Research Seminars 2019-20 Academic Year

Impact and Engagement Impact and Engagement 2019-20 Academic Year

Mathematics, Programming & Co... Mathematics, Programming & ... 2019-20 Academic Year

Methods in Environmental Resear... Methods in Environmental Resear... 2019-20 Academic Year

Planning Research Planning Research 2019-20 Academic Year

The Earth System The Earth System 2019-20 Academic Year

Advanced Statistics & Modelling Advanced Statistics & Modelling 2019-20 Academic Year

Advanced Methods Advanced Methods 2019-20 Academic Year

The other main place you will visit is the Calendar. Each course has a separate calendar. You can get a collated calendar by favouriting the relevant course calendars. This is the primary source of information about what training you will have each day, who is leading it, and most importantly where and when where it is happening. Note how the relevant button on the left is highlighted in white.

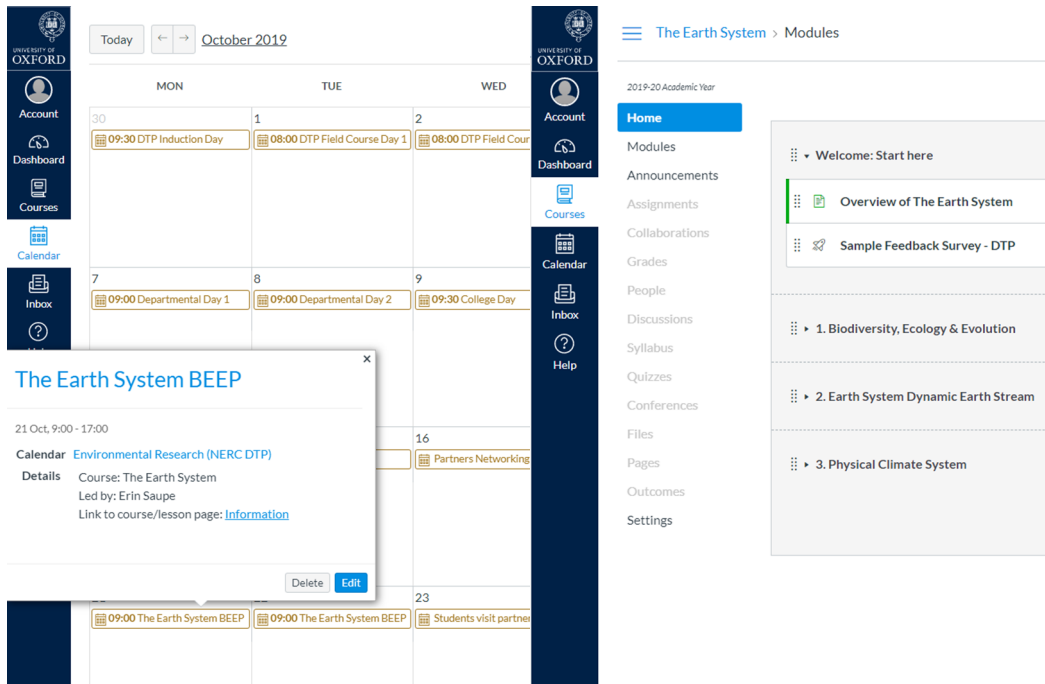
University of OXFORD

Today ← → October 2019 Week Month Agenda +

MON	TUE	WED	THU	FRI	SAT	SUN
30 09:30 DTP Induction Day	1 08:00 DTP Field Course Day 1	2 08:00 DTP Field Course Day 2	3 AOPP Retreat	4 AOPP Retreat	5	6
7 09:00 Departmental Day 1	8 09:00 Departmental Day 2	9 09:30 College Day	10 09:30 College Morning 13:00 DTP Afternoon	11 09:30 DTP Morning 13:00 College Afternoon	12	13
14 10:30 Introduction to Enterprise	15 10:30 Natural Capital	16 Partners Networking Meeting	17 Science Shop TBC	18 Science Shop TBC	19	20
21 09:00 The Earth System BEEP	22 09:00 The Earth System BEEP	23 Students visit partners TBC	24 09:00 The Earth System DESPNH	25 09:00 The Earth System DESPNH	26	27

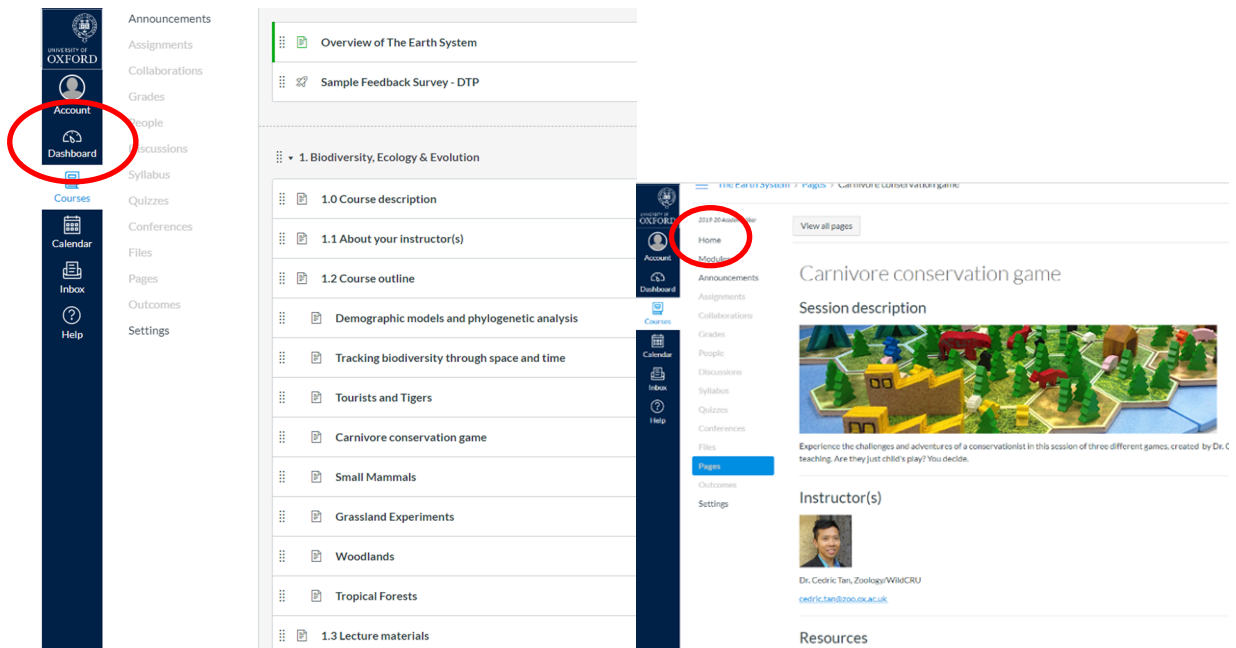
- Account
- Dashboard
- Courses
- Calendar
- Inbox
- Help

If you click on a calendar item you get a box that pops up giving some details about the course. If you click on “information that will lead you to the lesson pages for that course.



In the Earth System there are three sub-courses, one per stream so to see the Earth System course for a stream, just click on the title. Let’s look at Biodiversity, Ecology & Evolutionary Processes (BEEP).

Clicking on the title reveals a pop-down menu. In this case each of these is a session within the course. Clicking on one of these reveals the description of that session.



If you want to get back to the course page, press Home. If you want to get back to the Dashboard, click on the Dashboard icon in the left hand column.

You can control whether the sessions are visible or not, click the Course title again and the drop down menu will vanish.

There is a full guide to using Canvas here <https://canvas.ox.ac.uk/courses/21629> and IT services also run courses

Email List for Communicating about Training

2024-dtp-env-res@maillist.ox.ac.uk

We have created a mail list of all DTP student addresses that will be shared with training course instructors. This will be used to communicate directly with you about the courses and to highlight other courses that might be of interest. This mail list is not to be used for communicating about social events, etc. We are happy to help students to create a similar list for this purpose that each person can choose whether or not to be included. Some students prefer the enhanced functionality of social media platforms.

Part III

NERC & Your DTP Studentship

The NERC award/grant number for this DTP is: NE/S007474/1

What is a DTP?

All Research councils in the UK have stressed the need to ensure that students across the board receive comparable support and training, and that it is very important to build a strong sense of cohort. These are the connections that you will forge now and maintain throughout your professional life and they start here, with us.

NERC and Our responsibilities to them

NERC has invested a significant amount of public money in the Oxford DTP for Environmental Research, providing for 16 full studentships per year over a five year span. Unsurprisingly they require that we report back to them on various aspects of the programme and this means that we must monitor the progress and activities of our students very closely. You received a memo about this with your contract documents as we are obliged to let you know, and obtain your consent, to share this information with NERC in order for you to be able to take up your funding.

Monitoring Training

We must be able to tell NERC exactly how many students have attended each one of our courses, and what training each of our students has received over the course of their studentship. We therefore monitor attendance.

Monitoring Outputs

NERC now invites all Research Council funded students to inform them of outcomes arising from their studentship via Researchfish from year 2 onwards.

An email will be sent to all students and their primary supervisors, explaining data collection via Researchfish. In September, students will be sent links to register an account with Researchfish. Students will be able to add / edit their information all year round, but will need to log on and submit a return during the annual data submission period to confirm that the information is accurate and complete. All students will receive reminder emails closer to the time reminding them.

NERC will request details of every **publication** made by a DTP student that is related to their NERC-funded research, both during the course of the D.Phil itself and up to five years after completion.

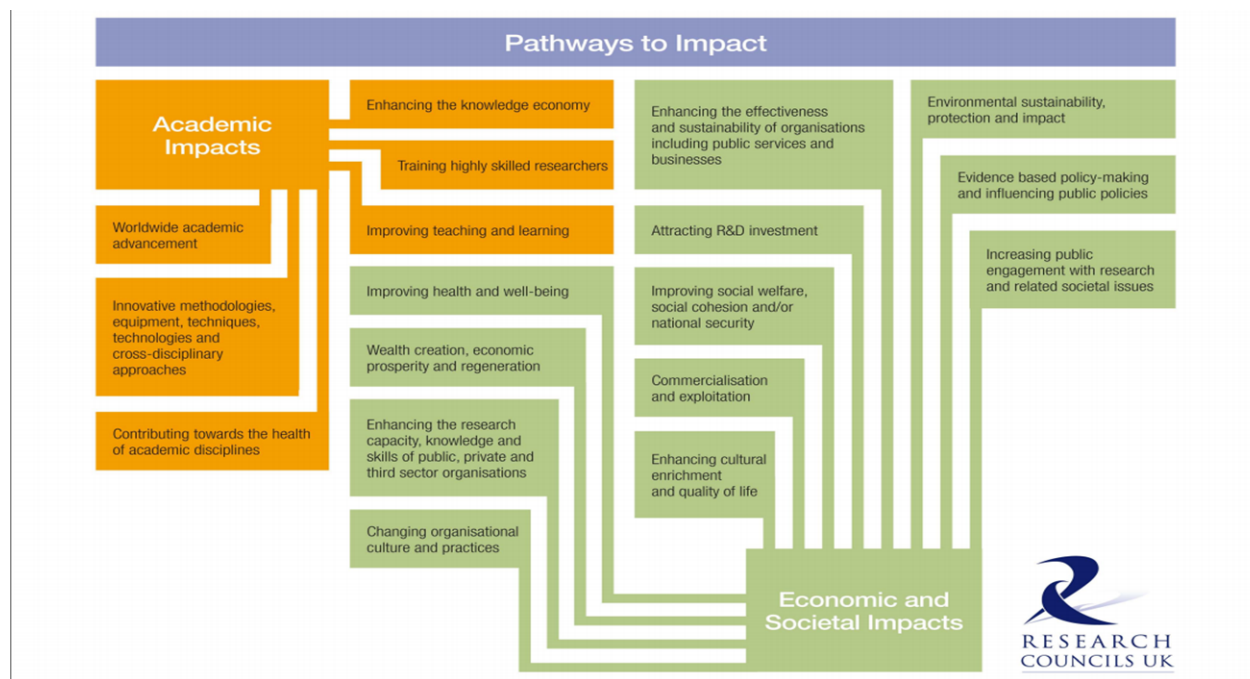
We have also been asked to keep a record of **impact activities**, such as **schools outreach, speaking or presenting at conferences, developing new technologies** etc and also attendance and participation at conferences. Please let us know of any such activities you are involved with as and when they happen. It can be difficult to know exactly what constitutes an impact activity, but the research councils created the diagram on the following page as guidance.

If in doubt, report it.

How to report?

You should email the DTP office whenever you have a paper published, giving us the full citation including d.o.i so that we can keep a record.

You should email the DTP office each time you carry out an impact activity and describe it to us in full, date, location, what the activity involved, why it is classed as an impact activity.



Your responsibilities to NERC

A full studentship holder, is supported with a grant of around £100,000. For a full NERC award that means £85,000 of this is from NERC and is therefore public i.e. taxpayers' money.

There is therefore a contractual obligation to do the following, and in particular whenever requested to do so by NERC or by the DTP

- **Keep us informed** about your outputs, activities, and progression (including viva dates and onward destinations after completion of your degree).
- **Archive** of your research findings
- **Secure additional funding** wherever possible to supplement your RTSG
- **Submit** your thesis within 48 months.
- **Open Access** to ensure that your research can reach the maximum number of readers online and in print you can apply to the open access block grant here <http://openaccess.ox.ac.uk/applying-for-funding-from-oxfords-rcuk-open-access-block-grant/> Please contact the APC team *at article acceptance (not submission)* to check if RCUK OA Block Grant funds are available and journal is funder-compliant (email APC team apc@bodleian.ox.ac.uk mentioning journal title).

2. If funds are available, apply for block grant by sending the APC team the current [application form](#) (dated July 2018).

Your Studentship

The DTP is responsible for managing your funding award from NERC throughout the duration of your programme. A full NERC studentship comprises the university tuition fee, a **tax free** stipend of £19237 in 2024-25 and an RTSG (Research Training Support Grant) allowance of £8000. If you have any questions regarding your award, or if any problems arise, please contact Victoria Forth, the Programme Manager.

Fees: The university has a Home course fee of £9500. The NERC contribution to this is £4786, the remainder is paid either by the DTP or some other university source. Our international students are only charged at the home fee rate as the university has waived the full International fee for UKRI-funded students.

Stipend is a grant for living expenses and for Home students this is funded by NERC. EU students are now classed as Overseas, however we are permitted to award full studentships at the home rate to overseas students, up to 30% of our intake each year. These students are classed as “Home” for fees purposes, even though they still have status as “Overseas”.

NOTE: If you have a problem with a stipend payment being late, please contact the DTP office.

RTSG (Research & Training Support Grant): Each DTP student will receive RTSG allowance of £8000 towards research and training costs. This becomes available to you at the point at which you submit your project proposal. Your RTSG is held within your department rather than by the DTP. **You will have a unique code to which you can charge your research costs, and your departmental finance office will be made aware of this code so they can add this to any expenses claims or orders. You are also entitled to know the code and should contact the DTP office to find out what your code is once you have submitted your proposal.** The RTSG is for research costs only, office equipment should be provided by the Department.

You must keep a careful track of your RTSG spending. We can provide reports from the Oracle finance system if necessary, but you should be aware of what you have spent **AT ALL TIMES**.

Supervisors’ travel expenses will not be met by the RTSG and supervisors should secure funding from other sources.

An RTSG Approval form must be submitted if computer hardware, or large items of lab equipment are needed, this is explained in more detail in the RTSG guidance appendix.

Once you have spent your RTSG budget no additional funds are available, so try everything to find alternative sources of funding to supplement it.

Partial Awards/Other sources of funding

Some students will be funded from more than one source. As long as NERC pays for one element of a studentship, these students are still covered by NERC Terms and Conditions and receive a NERC RTSG. The main ones are

Clarendon Award: These can be full awards of partial, covering one or more of university fee, stipend, college fee elements. Some EU students with a NERC fees-only award will have a Clarendon award that covers stipend, and sometimes also college fees.

College Partnership award: Some colleges offer co-funding for students who have already received a research council studentship. In some cases students will be matched with such an award after offer. This may be a full stipend, or it may be a fixed sum of money per year.

Industrial Partnership funding: Occasionally an Industrial Partner contributes funding towards a studentship, or even a whole studentship.

Sick, Parental, and other Exceptional Leave

In addition to following the steps outlined in the “Interruption of Studies” section of this handbook, students can also apply for sick, parental (maternity, paternity and adoption), and compassionate leave, which is a separate process related to funding and stipend. The divisional policy can be found here: <https://www.mpls.ox.ac.uk/graduate-school/funding-for-graduate-students/sick-parental-and-other-exceptional-leave-policy>. It is essential that the Programme Manager is informed by email of any periods of absence due to sick, parental, and compassionate leave as soon as is reasonable and practical.

For sick leave, four weeks is the minimum period that can be claimed. Where a student is absent on grounds of illness for a period less than four weeks, their funding will continue as normal, but they will be expected to absorb the period of illness into the overall duration of their award (4 years) as short periods of illness such as colds and flu are expected. The maximum sick leave that can be applied for is 13 weeks per academic year, up to a maximum of one year in total (i.e. 13 weeks of sick leave during each of the four years of the DPhil). Medical evidence is required to support an application for sick leave, such as a letter from a Doctor, College Nurse, Counsellor, or Physio. The Programme Manager should be made aware of all absences which fall into the category of sick leave when they occur and all claims for sick leave payments need to be made within 12 months of the period of absence commencing. The exception to this is for students with ongoing intermittent or chronic conditions or illnesses which the Programme Manager or Director has been made aware of in advance. It is possible if necessary for students to move to part-time working, but this should be discussed with the Programme Director(s) and will be looked at on a case-by-case basis

Please note that sick leave and suspensions are not equivalent. Students will only be awarded sick leave payments for the period for which they are ill, and that as terms may exceed this duration, Trinity Term in particular, this may mean the students submission deadline lies beyond their funded period. In these cases, with the support of their supervisor, students are encouraged to endeavour to submit within the funded period

The End of the Studentship

Your studentship ends the day you submit your thesis, and with it your RTSG. You have two months to put in any claims you intend to make to your RTSG once your studentship has ended and after this point it will be too late.

If, however, you are engaged in work relating to your project/thesis (e.g. writing papers) then your studentship can be extended to the end of the financial quarter in which you submitted. For this reason it makes sense, if possible, to submit as close after the start of a quarter as possible (1st October, January, April and July)

You can claim up to £200 towards the cost of thesis printing and this can be charged to your RTSG. If your RTSG has already been closed by the time you submit your claim then please submit it to the DTP office who can charge it to another element of the grant.



MPLS Doctoral Training Programmes

Confirmation of DPhil Project Department

Student Name			
Student Number		College	
Current Programme of Study			
Year of Entry to Programme			
Funding Details			

DPhil Project Department (for Physics and Chemistry please specify the sub-department e.g. Inorganic Chemistry)	
Date of Entry to DPhil Project Department	
Main Supervisor (include SSO)	
Co-Supervisor(s) (include SSO) (all students must have at least 1 co-supervisor. For external supervisors please ensure you have arranged virtual access for them)	
DPhil Project Title	

The above named student will be located within the department listed on this form for the duration of their DPhil project. They will have access to all facilities necessary for the completion of the project and whilst located within the department will be treated as a standard departmental student and as such will be expected to abide by departmental and divisional rules and regulations, as appropriate, as well as the regulations for their original programme of study.

Name & Signature of Primary Supervisor	
Name & Signature of Dept MC member.	
Name & Signature of Department DGS (or Equivalent)	
Name & Signature of DTP Administrator	

The completed form should be sent to: MPLS Divisional Office (Graduate Studies) Graduate.Studies@mpls.ox.ac.uk

Appendix B



RTSG Guidance 2024-25

Each NERC funded DTP student has a Research Training Support Grant (RTSG) of £8000.

Once students have handed in their research proposals and started on their projects they can access their RTSG budgets. RTSG money can be spent on costs directly incurred during the training and research of students. For example, conference attendance and training workshops, lab consumables, software licenses, processor time on super computers, and equipment.

Students are required to monitor their own spending closely and to be able to provide a running total of expenditure if requested, as well as evidence of supervisor approval. A simple access database or excel file are sufficient. The DTP office and your departmental finance office will also provide reports on request which students can check to confirm spending has been correctly coded.

It is advised that students get an email from their supervisor approving each spending request, and keep this in a file, as well as keeping a spreadsheet to track spending. A photocopy of a signed expenses/advances/requisition form would also count as a supervisor approval.

Control of the Budget

You and your supervisor have overall control of this budget with two notable exceptions, where you must seek Management Committee approval prior to making a purchase.

1) Computer Equipment

NERC does not support the purchase of computer equipment on a routine basis, from the RTSG. This is because it expects that departments will provide computing equipment to students. However, they have said to us in an email that "RTSG can be used to buy a computer where this directly relates to the studentship project. For example, a MacBook for a student that will be undertaking a large amount of atmospheric modelling and will need to travel a lot. Funding should not be used to, say, provide every DTP student with a laptop as, in essence, a perk. ... it should be for when students need a specific computer to carry out their research." We therefore need to be able to justify to NERC auditors when we allow purchases of computer equipment from the RTSG.

Computers, where approved, must be purchased by the departmental IT department. Much of the university of Oxford's software is only licensed for use/available to purchase on university-owned machines. IT support for personal machines is also significantly restricted and personal machines may not be allowed the same level of access to the network.

2) Large pieces of Lab equipment

There have been occasions in the past where RTSG has been used to purchase large items of laboratory equipment for whole research groups. In order to protect students against this, we

do as you to seek approval in these cases, so we can ensure it is directly relevant to your research project.

RTSG Approval form - This should be used for computer equipment and large pieces of laboratory equipment. The form is available on Canvas in the student information section. Also at the end of this document.

Accessing the RTSG

Your department has access to your RTSG budget so you should liaise with your departmental finance office for purchasing requests.

You can access the RTSG in 3 ways

1) **Expenses Forms:** Make a purchase and claim back on a university expenses claim form. This is approved by your supervisor in the first instance and authorized by the department's finance office where you hand it in. You will need to present original receipts alongside the claim and the signature on the form must be original. You must submit the claim within 3 months of the expenditure date. Info on how to complete the form is at this link

<http://www.admin.ox.ac.uk/finance/epp/forms/expensesandrelocation/>

Airbnb – please note that there are restrictions on the use of Airbnb for accommodation whilst on university business. You need to read the guidance, and seek approval [Annexe C] before booking, from the DTC head of administration and finance, Samantha Taylor.

2) **Purchase Orders:** You can either raise the PO yourself if you have had shopper training, or ask your department to order the equipment for you using a PO requisition form. You should follow internal procedures in this case. This should always be done with computer equipment, so your IT office can support you.

3) **Advances:** Apply for an advance on a university cash advances form – mostly used for fieldwork. Hand this in to your department finance office once you have completed it. You will also have to send in a reconciliation form when you return, so keep all your receipts.

University forms are available on the DTP Canvas site [here www.canvas.ox.ac.uk](http://www.canvas.ox.ac.uk) or at this link <http://www.admin.ox.ac.uk/finance/epp/forms/>

Please note: The RTSG should not be used for the cost of supervisors' travel or costs. Supervisors should find alternative sources of funding.

NERC's guidance states

"The RTSG is not intended to relieve an RO of any part of its normal expenditure." In other words RTSG cannot be used, under NERC rules, for anything which the research organisation normally provides to its graduate students. This means that whatever guidance your department usually applies to standard D.Phil students also applies to DTP students. If your department has any kind of understanding in place that supervisors or the department should provide or contribute towards computers for students from their grants, then that should extend to DTP students as NERC expects the same rules to apply to students across the board. They will not support the blanket provision of computers to all DTP students from the RTSG. Similarly, office furniture, headphones, stationary supplies are all considered to be the responsibility of your department.

RTSG Approval forms should be submitted to the DTP office once completed. Items up to £500 can be approved immediately by the DTP Manager, over and above that the relevant MC member must approve

The Research Council guidelines on how RTSG should be used are as follows.

RCUK Training Grant Condition 6 paragraphs 46 - 52 36

- 11.1. The TG includes a Research Training Support Grant (RTSG) component. This is a contribution towards costs incurred in training research students e.g. the provision of consumables, equipment, travel, etc. The RTSG is not intended to relieve an RO of any part of its normal expenditure.
- 11.2. Additional funding can be drawn from the TG to fund activities to support student training such as student attendance at conferences, internships, workshops and short course attendance and internships. Support might also be provided for, local, cohort specific activities, for example, to develop opportunities which arise from being part of a peer group or to raise awareness amongst the cohort of the wider context in which their doctoral research sits doctcrate was funded. Some RCs may also provide additional funding for activities eg overseas fieldwork; information is available on the individual RC websites.

Full document available here: <http://www.rcuk.ac.uk/RCUK-prod/assets/documents/publications/TrainingGrantGuidance.pdf>

Quick Reference guide

YES	NO	MAYBE (require RTSG approval form)
<p>Laboratory Consumables and equipment</p> <p>Travel to fieldwork and conferences</p> <p>Subsistence while travelling or at conferences and workshops</p> <p>Accommodation at fieldwork and conferences</p> <p>Fieldwork assistants</p> <p>Training courses (in-person and online)</p> <p>Software and cloud computing</p>	<p>Office chairs and other furniture</p> <p>Keyboards, laptop risers, headphones, mice</p> <p>Stationary supplies</p>	<p>Laptop/desktop computers (one per project)</p> <p>Monitors</p> <p>Large pieces of lab equipment</p> <p>Large pieces of technical equipment</p> <p>Mobile devices such as Tablets/smart phones/cameras</p>

Backup hard drives		
Processor time on super-computers		

List of commonly bought items and the most convenient way to buy.

(please let us know if you think any other items should be added to the list)

Purchase Orders must be raised before an invoice is received. They are an instruction to the supplier to provide the goods or services. The purchase order number should be included on the invoice.

Train tickets	buy yourself and claim back on R12 expenses form
Air tickets	as above/use university travel agent,
Accommodation & subsistence	pay and claim back
Conference registration	pay and claim back
Attendance at courses	pay and claim back / Department raises PO
IT equipment	Department raises PO
Lab consumables	Department raises PO
Lab analysis work	Department raises PO
Cash for fieldwork form.	cash advances can be obtained using the R12 advances form.

In the case of both expenses claims and cash advances please note the following

- Receipts must be kept and a reckoning form completed after spending has occurred.
- Each receipt should be given a line on the claim, do not total up types of expenditure.
- Put the currency of expenditure on the form, and provide an exchange rate with the evidence for that exchange rate.
- Do not part with cash for "bribes", always get a receipt that can be attached to a claim.
- Take a receipt book with you on fieldwork if necessary so they can be handwritten.
- Claims for staying with a friend or colleague overseas will not be paid, only hotels, hostels etc.
- Read the university's policy on bribery and fraud.

<http://www.admin.ox.ac.uk/councilsec/compliance/briberyfraud/>

Appendix C

Guidance on claiming expenses

- The University does not expect students to pay for goods or services where it can pay directly (for example, using a purchasing order). When this is not possible, students can pay themselves and claim via the expenses process. Any expenditure claimed via expenses must be in line with the [Expenses Principles](#). Before you spend, think about whether this is the right route, or whether the University is able to pay directly. For example, purchases such as long-haul flights should be purchased directly through the University's preferred supplier, Key Travel, as this could be cheaper than a flight booked by an individual and claimed through expenses; catering for workshops should be arranged through the DTC.
- Please provide the reason for the claim and full descriptions/explanations of the costs that you are claiming, particularly if the receipts are in a different language. This will reduce the need for claims to be returned with queries, which will mean that the reimbursement will be made more quickly.
- It is important for expense claims to be made in a timely manner. For budget management purposes and to avoid the risk of any overspend etc., expense claims should be made **within three months of being incurred or of returning to the UK**. This is particularly important if the costs are to be reclaimed from a studentship grant, which will have a definite end date for reclaiming costs. Once the end date has passed, the remaining money in the grant is returned to the funder and no further costs can be paid. Any claims not submitted within the three-month period must include an explanation as to why (lack of organisation or lack of awareness or forgetfulness of the procedures etc. are not acceptable reasons for delay), and it's possible that they could be rejected by Central Finance.
- It is an HMRC requirement that all expense claims are supported by evidence. The evidence must include **detailed (itemised) receipts and proof of purchase** for all costs that are claimed. If an itemised receipt is not offered by the vendor, please request this in order to claim the cost via expenses. If you only have an invoice or order confirmation which doesn't include confirmation of payment, please also submit a copy of your bank or credit card statement as evidence that payment was made. **Please note, a screenshot confirming payment on a payment app alone is not sufficient evidence, and must be accompanied by an itemised invoice or receipt.** Any claims submitted without receipts or reasonable explanations may be rejected.

Accommodation and subsistence expenses guidance:

- **Overnight accommodation**
Appropriate and safe accommodation should be used, ensuring that value for money is achieved.
For UK accommodation, reasonable rates are considered to be:
 - Major cities: £150 per night
 - Other: £100 per night

- **Meals and beverages**

Food and beverages taken as a meal (breakfast, lunch and dinner) can be claimed while travelling on University business if the meal-time falls within the journey.

Reasonable rates, including beverages, for meals (without a tip) are:

- Breakfast: £10;
- Lunch: £10;
- Dinner: £25.
- Tips: up to 15%

Please note: meal rates are for each meal and **CANNOT** be accumulated.

- **What should not be claimed**

- No payment or payment in kind can be made if you stay with family/friends
 - Personal items (e.g. toiletries)
-
- Airbnb accommodation should not be considered as a direct alternative to staying in a hotel. The University does not recommend the use of Airbnb due to increased health and safety and security risks compared to hotel accommodation and, as such, the costs of Airbnb accommodation can only be refunded at the discretion of the department. Therefore, please can you obtain written approval from Sam Taylor, the Head of Administration and Finance at the DTC, **prior to booking** Airbnb accommodation that will subsequently be reclaimed through expenses, and attach a copy of the email from Sam to your expense claim.
 - The University can only reimburse 'business' costs, i.e. costs that are directly related to your DPhil (additional personal expenditure is not eligible to be reimbursed). For example, for travel to a conference, the University will reimburse travel out of, and returning to Oxford. If the conference is in another country, the flights should be from, and returning to the UK. However, it's possible for the start or end location of the flight to be different from the UK for personal reasons, but the University will only reimburse the equivalent cost of a return flight from the UK for the same dates of travel. In order for this reimbursement to be made, you must provide proof of the cost of a return flight from the UK for the same dates that you will be flying, such as a screenshot of an airline's website with all the details entered. The proof will need to include all the relevant information: the supplier name, to and from location, dates of travel, and price (rather than just showing the price). The University can then reimburse up to this equivalent amount.



Graduate Research Training and Support Grant

RTSGs aim to contribute to support research and conference attendance of DPhil students, with direct relevance to their DPhil project and training.

RTSG Approval Form

Use this form if you are purchasing:

1) Computer Equipment – we must be able to justify this to NERC who do not support blanket provision of computer equipment to students from the RTSG. If approved this must be purchased through your departmental IT department so that it is eligible for university licenced software.

2) large items of lab equipment – you must be able to demonstrate that this equipment is directly relevant to your project.

This form must be submitted to the DTP office before the spending occurs, not alongside the claim. Please email it to

Victoria.forth@env-res.ox.ac.uk

Once we have obtained Management Committee approval (usually within 24 hours) we will forward this to you and you can go ahead with the purchase. You can present the email to your finance office as evidence.

Name of Student	
Name of Supervisor	
Student funding source.	NERC/RS/College/EU/Clarendon/other
Please give total amount of RTSG support awarded to date.	
Justification of resources sought – please explain why this equipment is necessary	

<p>to your project and why the department is unable to provide it. Please provide as much detail as possible.</p>		
<p>Budget breakdown (GBP) with total amount to be set against the RTSG.</p>		
<p>Have you obtained any additional funding towards this proposal?</p>		
<p>Please list alternative pending applications to fund this proposal.</p>		
<p>Signature of Applicant</p>		<p>Date</p>
<p>Signature of Supervisor</p>		<p>Date</p>

Appendix E

Guidelines and Considerations for AirBnB or Similar Accommodation;

The University of Oxford has a legal responsibility for the duty of care of its employees and student that includes ensuring they are safe and looked after while travelling for University purposes.

Considerations when accommodation is booked through unapproved suppliers:

- When booking outside of a Travel Management Company, through sites such as AirBnB, there are no regulations to ensure properties are inspected or that they are safe (smoke alarms, health and safety etc)
- Confirmations can take 24 hours, or longer, and so are not immediate
- Whilst some of the properties may look appealing and appear good value for money, they are often private houses or rooms in private houses, without any guaranteed, audited or controlled standards that help the University comply with its duty of care responsibility
- Vendors are able to access the property at any time which presents a security risk (both personal and University property risk)
- Properties may not match the website description, or the host may be unresponsive to traveller needs, which could leave the traveller at risk
- To operate as Hotels and Serviced Apartments all suppliers must have liability insurance providing cover against claims made by members of the public who have suffered injury or damage (including to their property), private vendors would not usually have this
- Hotels and Services Apartments are aware of the requirements of lone travellers and have security policies in place such as;
 - Secure door entry systems and manned 24 hour reception
 - Handing over room details discreetly at check in, so they are not overheard
 - Where possible giving single female travellers rooms that are not on the ground floor or at the end of a corridor
 - Bedroom door fitted with a deadlock or chain and a door spy holes
- The AirBnB website states that they will continue to list properties even if the smoke and carbon detectors are not present, or do not work
- If a traveller is unhappy with the accommodation, AirBnB would have no obligation to find an alternative property, or offer a service level to support the University meet their duty of care responsibility
- Hotels and Serviced Apartments have support services including on site, with reception and post travel customer services to help meet traveller needs and University responsibilities
- Wi-Fi needs to be secure if working on University business, and private Wi-Fi may not be secure, vendors may have access to Personal Identifiable Data, which could leave the traveller vulnerable. If the traveller is going to work on any University data, they should only do so when connected to the University's VPN, to mitigate risks in the wifi connection.