

Welcome to the E4 DTP

Dear E4 Students,

I am delighted that you have chosen to pursue your PhD with the E4 DTP. Our students already have outstanding academic and professional records before they join us, and I know that you will have had many options. We aim to make the DTP an exciting and rewarding environment, but it is our students who make E4 a success.

Our funder, the Natural Environment Research Council (NERC), requires DTPs to be multidisciplinary, and we have worked very hard to offer a diverse range of topics. Our DTP spans all of NERC's remit, from the early origins of life, to mantle geochemistry, ocean and atmospheric circulations, environmental conservation, sea level rise, ecology, and many other topics. You will be interacting with people from a wide range of disciplines and gaining exposure to different approaches from which totally new discoveries can emerge.

We have designed our training to suit the many backgrounds of our students, from traditional geosciences and ecology to chemistry, mathematics, informatics and physics. We have cohort building activities that you will take with all of your DTP peers, regardless of their PhD topics, to enhance your transferrable skills. You will also have access to world-class disciplinary training tailored to your PhD research.

We also aim to make the DTP a friendly and welcoming place. We want you to enjoy your PhD time. A sensible work-life balance will make you more productive, and Edinburgh and its surroundings are consistently ranked among the best places to live in the UK. You will be joining a vibrant community of more than 20 students in each year cohort who we hope will be your professional network, your collaborators, and your friends for years to come.

I look forward to meeting you,

Richard Essery, E4 DTP Director

The University Firbush Outdoor Activity Centre, Loch Tay, where DTP students have their first residential training workshop. ©SR



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The E4 DTP Partners

The E4 DTP brings together 33 partners that have a track record of world-leading research, end-user engagement and PhD training. Our partnership spans the NERC remit to bring together university partners, independent research organisations, government and non-government agencies and industry.

Academic Partners

The School of GeoSciences

The <u>School of GeoSciences</u> has over 500 academics, researchers and research students, and is the largest and most successful



THE UNIVERSITY of EDINBURGH School of GeoSciences

interdisciplinary grouping of geoscientists and geographers in the UK. The School explores the factors and forces that shape our world, and aims to understand the world through fundamental curiosity-driven research and to support prescient decision-making at individual to global scales.

Www.ed.ac.uk/geosciences

The School of Biological Sciences

The <u>School of Biological Sciences</u> is one of the largest centres of biological science in the UK and is consistently highly ranked for its research quality (e.g. 3rd in the 2014 UK research



THE UNIVERSITY of EDINBURGH School of Biological Sciences

excellence assessment). We place a particularly strong emphasis on interdisciplinary research, studying how populations are responding to environmental change, how this might impact at all biological levels from the cellular to the ecological level, and finding solutions to address the impact this may have with colleagues across the medical, veterinary and physical sciences.

www.ed.ac.uk/biology

The School of Chemistry

The <u>School of Chemistry</u> at the University of Edinburgh is one of the largest in the UK, with external research assessment metrics to match (e.g. EaStCHEM ranks second in the "Power



THE UNIVERSITY of EDINBURGH School of Chemistry

Table" (out of 35). The School's research and facilities relevant to E4 DTP science include: environmental and atmospheric chemistry; sustainable chemistry (cleaner syntheses and chemical recovery); photovoltaic and energy-storage materials; and chemical analysis including state-of-the-art mass spectrometry and NMR.

www.chem.ed.ac.uk

The School of Physics and Astronomy

The <u>School of Physics and Astronomy</u> is involved in the E4 DTP through its Astrobiology research theme. This group investigates life in extreme



THE UNIVERSITY of EDINBURGH School of Physics & Astronomy

environments, how life adapts to single and multiple extremes, how life adapts to conditions in the planetary crust and we investigate the habitability of other planetary bodies. The group's work involves field, laboratory and theoretical approaches.

www.ph.ed.ac.uk



Researchers
working on
water and
wastewater
treatment
processes
in the
Environmental
Engineering
Laboratory in
the School of
Engineering.
©University of
Edinburgh

The School of Engineering

The <u>School of Engineering</u>'s research activities are directed through seven institutes, of which the Institute of Infrastructure and Environment (IIE)



THE UNIVERSITY of EDINBURGH School of Engineering

carries out research contributing to efficient, sustainable and resilient infrastructure in the built and natural environments. The School has particular expertise relevant to the E4 DTP in eco-hydraulics, flood modelling, water and wastewater treatment, and water and sediment science.

www.eng.ed.ac.uk

The School of Informatics

The <u>School of Informatics</u> provides a fertile environment for a wide range of studies focussed on understanding computation in both artificial



informatics

and natural systems. With over 450 academic and research staff and over 850 students, the School of Informatics at the University of Edinburgh is the largest in the UK and one of the largest in Europe.

www.ed.ac.uk/informatics

The School of Mathematics

The <u>School of Mathematics</u> is one of the UK's topranked mathematics departments, with expertise in mathematical, statistical and computational



THE UNIVERSITY of EDINBURGH School of Mathematics

modelling applied to the natural environment. Research themes include ocean dynamics, inverse problems, uncertainty quantification, spatio-temporal modelling, and energy systems. The School's involvement in the Alan Turing Institute and the ICMS provides valuable links.

www.maths.ed.ac.uk

The Royal (Dick) School of Veterinary Studies

The Roslin Institute and the Global Academy of Agriculture and Food Security within the R(D)SVS



THE UNIVERSITY of EDINBURGH Royal (Dick) School of Veterinary Studies

undertake multidisciplinary research in collaboration with a wide range of national and international partners. We bring world-leading expertise and facilities in animal, plant and soil systems; environmental security and change; climate smart agriculture; resource economics; data science and mathematical modelling; sustainable rural development; land rights and the science-policy interface.

www.ed.ac.uk/vet

The Scotland's Rural College (SRUC)

<u>SRUC</u> is an innovative, land-based Higher Education Institution, which specialises in applied and interdisciplinary research to support the sustainable development of land-based industries and communities. SRUC works in partnership to deliver research degree programmes focussed on practical problem-solving in the animal, plant, environmental and social sciences.



The Scottish Association for Marine Science (SAMS)

The <u>Scottish Association for Marine Science</u> is Scotland's largest and oldest independent marine science organisation, delivering marine science for a productive and sustainably managed



marine environment through innovative research, education and engagement with society. Based near Oban, SAMS has diverse and multidisciplinary research and teaching portfolios including fundamental processes of ocean systems, changes in our coastal environments and the growing blue economy.

www.sams.ac.uk

Centres of Excellence

Our Centres of Excellence bring together a breadth of cross-disciplinary partners to tackle environmental challenges and will serve as major catalysts to provide engagement with end users and in formulating projects meeting their needs.

The Edinburgh Climate Change Institute (ECCI)

The <u>Edinburgh Climate Change Institute</u> is a leading centre for research, teaching, policy and practice for climate action within the University of Edinburgh. It is an interdisciplinary and exclusive hub for researchers, policy makers, businesses, students and educators driving evidence based climate action across Scotland, the UK and



https://edinburghcentre.org

Aerial images of the Scottish Association for Marine Science near Oban, based on a peninsula neigbouring 13th century Dunstaffnage Castle © SAMS



The Edinburgh Parallel Computing Centre (EPCC)

The <u>EPCC</u> has been an International centre for excellence in high-performance computing for over 25 years. In addition to providing world-class systems, data storage and support



services for industry and science, the EPCC holds a global reputation for innovative and leading-edge high-performance computing research and delivers expert-led training in high-performance computing for engineers and scientists.

www.epcc.ed.ac.uk

The Scottish Universities Environmental Research Centre (SUERC)



The <u>Scottish Universities Environmental</u> Scottish Universities Environmental Research Centre Provides access to high-

end analytical equipment and specialist expertise for research in Earth and environmental sciences. We maintain the UK's most comprehensive suite of techniques for dating and tracing terrestrial processes, and our researchers apply them to problems in Earth history, environment reconstruction and ecology.

www.gla.ac.uk/research/az/suerc

Global Academy of Agriculture and Food Security (GAAFS)

GAAFS is an interdisciplinary hub of research within the University of Edinburgh, teaching and consulting expertise, to support decision making to transform agri-food systems and food security. Feeding the world's growing population well, while protecting the natural systems on which we all depend, is one of the greatest challenges facing humanity. Agriculture, core to achieving food security, is both a key driver of environmental degradation, and extremely vulnerable to environmental change.

www.ed.ac.uk/global-agriculture-food-security

The Bayes Centre

The <u>Bayes Centre</u> is the University of Edinburgh's Data-Driven Innovation Hub hosted by the College of Science and Engineering. Through activities



across education, research, and innovation, the Centre works to power the interaction of people, data and systems, harnessing world-leading data science and AI research for the benefits of the economy and society. The Centre will host up to 600 researchers, students and partner organisations from a variety of sectors, from healthcare to robotics.

www.ed.ac.uk/bayes

National Capability

E4 brings together key partners across the UK that provide National Capability.

Centre for Ecology and Hydrology (CEH)

<u>CEH</u> is the UK's Centre of Excellence for research in land and freshwater environmental sciences. CEH's supervisors specialise in a wide range of disciplines,



working in multi-skilled teams offering a unique breadth of experience and knowledge. Student's benefit from diverse laboratory facilities, field sites and datasets to support their research.

www.ceh.ac.uk

British Geological Survey (BGS)

The <u>British Geological Survey</u> is a world-leading geological survey. It focuses on public-good science for government, and research to



understand Earth and environmental processes. It is the UK's premier provider of objective and authoritative geoscientific data, information and knowledge. The BGS provides expert research services in all areas of geoscience.

www.bgs.ac.uk

National Centre for Atmospheric Science (NCAS)

The <u>National Centre for Atmospheric Science</u> is a world-leading research centre dedicated to the



advancement of atmospheric science, funded by the Natural Environment Research Council (NERC). It carries out research in air pollution, climate and high-impact weather, and long-term global changes in atmospheric composition and climate, and provides the UK community with state-of-the-art technologies for observing and modelling the atmosphere.

National Centre for Earth Observation (NCEO)

The <u>NCEO</u> is a NERC research centre with more than 80 scientists distributed across leading UK universities



and research organisations. It provides the UK with core expertise in Earth Observation science, data sets and merging techniques, and model evaluation to underpin Earth System research and the UK's international contribution to environmental science.

www.nceo.ac.uk

NERC Environmental Omics Facility (NEOF)

The <u>NERC Environmental Omics Facility</u> is a centre of excellence that allows the UK to maintain and develop its world-leading position in environmental omics. It empowers the next generation of environmental researchers with a full range of omic tools such



as new generation sequencing, isoform analysis, epigenomics, quantitative proteomics, quantitative metabolomics, phenomics and meta'omics and single cell omics.

neof.org.uk

Royal Botanic Garden Edinburgh (RBGE)

RBGE brings expertise in biodiversity and distribution of plants and fungi, taxonomy, floristics, biogeography, population biology, conservation genetics, species distribution modelling. It has 5% of the world plant



Royal Botanic Garden Edinburgh

species (13.5K species) in cultivation and 3 million preserved herbarium specimens.

www.rbge.org.uk

Biomathematics and Statistics Scotland (BioSS)

<u>BioSS</u> specialises in the development and application of the quantitative (computational, statistical and mathematical) methods and is recognised internationally for its work at the interface between the mathematically-based sciences and a wide span of applied sciences covering agriculture and the rural economy, the environment, food and health.



www.bioss.ac.uk



Researchers doing assessments and taking measurements on finger millet and beans at CEH's solardome Facility, Abergwyngregyn near Bangor.

© Daniel Hauck - CEH



Policy, Industry and Society

Our policy, industry and society partners ensure research excellence is aimed at delivering key policy objectives for the UK.

The Met Office

The Met Office is recognised as one of the world's most accurate forecasters, using more than 10 million weather observations a day, ar advanced atmospheric model and a high performance supercomputer to create 3,000 tailored forecasts and briefings a day. These are delivered to a huge range of customers from the Government, to businesses, the general public, armed forces, and other organisations.



www.metoffice.gov.uk

The Scottish Environmental Protection Agency (SEPA)

The <u>Scottish Environmental Protection Agency</u> is Scotland's principal environmental regulator, protecting and improving Scotland's environment. As an organisation with a strong science base, SEPA constantly assess the quality of the environment by monitoring the air, land and water and use our findings to advise government,



industry and the public on environmental best practice. They help business and industry to understand and comply with their environmental responsibilities and legislation.

www.sepa.org..uk

Carbomap

<u>Carbomap</u> are 3D mapping specialists. They have an international reputation in remote sensing methodologies; LiDAR forest mapping, satellite radar mapping, flood risk mapping; as well as managing airborne and UAV surveys.



They are leading this emerging market, having worked with government agencies, NGO's and research institutes. www.carbomap.xyz

Forest Research (FR)

<u>Forest Research</u> is Great Britain's principal organisation for forestry and tree related research and is internationally renowned for the provision of evidence and scientific services in support of sustainable forestry.



www.forestresearch.gov.uk

Space Intelligence

Space Intelligence provides maps of forests, deforestation and forest degradation. Based on a foundation of worldclass science, the company was formed in response to the growing number of requests for satellite data analysis in



the private and public sectors. They have research and consultancy experience across the tropics, with projects undertaken in Africa, Asia and the Americas. They also undertake work closer to home, having conducted landscape analysis for the UK Government's Department of Energy and Industrial Strategy, and more recently with the Forestry Commission here in Scotland.

www.space-intelligence.com

National Physical Laboratory (NPL)

The National Physical Laboratory delivers world-leading measurement solutions that are critical to research and development, and support business and academic success across the UK and the globe. Support for this DTP will come



via the Post Graduate Institute for Measurement science (PGI). The PGI was developed through a strategic partnership between the National Physical Laboratory (NPL) and the universities of Strathclyde and Surrey. The PGI connects industry and academia to the UK's national measurement capability and expertise, offering models of engagement, training and connection to DTP students. www.npl.co.uk

National Trust for Scotland (NTS)

NTS is the largest member organisation in Scotland. As a conservation charity, they are supported by more than 380,000 members and are funded largely by donations. Since 1931 their love for Scotland has fuelled the desire to protect the



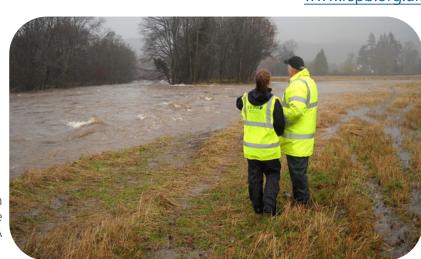
things that make it special. By championing Scotland's natural, built and cultural heritage they inspire those around us. From coastlines to castles, art to architecture, wildlife to wilderness, they encourage people to connect with the things that make Scotland unique while protecting them for future generations. www.nts.org.uk

Royal Society for the Protection of Birds (RSPB)

The RSPB is now the largest nature conservation charity in the country, consistently delivering successful conservation, forging powerful new partnerships with other organisations and inspiring others to stand up and give nature the home it deserves.



www.rspb.org.uk



SEPA Officers on a flooded site © SEPA

British Trust for Ornithology (BTO)

The <u>British Trust for Ornithology</u> is an independent charitable research institute combining professional and citizen science aimed at using evidence of change in wildlife populations, particularly birds, to inform the public, opinion-formers and environmental policy- and decision-makers.



www.bto.org

National Museums Scotland (NMS)

With over 10 million specimens, National Museums Scotland holds the second largest natural science collection in the UK. These provide a basis for a wide spectrum of research programs in the geological and biological sciences. NMS has



broad curatorial expertise and a range of basic analytical equipment such as XRD, XRF and SEM with EDS.

www.nms.ac.uk

Scottish Wildlife Trust (SWT)

For the past 50 years, the <u>Trust</u> has been successfully championing the cause of wildlife through policy and campaigning work, demonstrates best practice through practical conservation and innovative partnerships, and inspires people to take positive action in pursuit of its vision



of healthy, resilient ecosystems across Scotland's land and seas through its education and engagement activities. It also manages a network of 120 wildlife reserves across Scotland and is a member of the UK-wide Wildlife Trusts movement.

www.scottishwildlifetrust.org.uk

Scottish Natural Heritage (SNH)

<u>Scottish Natural Heritage</u> promotes, cares for and improves Scotland's natural heritage. We enable a greater awareness of nature and help people to enjoy nature responsibly. Looking to the future, we promote the sustainable use of natural assets now.



www.nature.scot

Confor

<u>Confor</u> is a not-for-profit organisation that works and lobbies on behalf of the private forestry and wood sector. It represents the whole forestry and wood 'supply chain' and focus on the



strategic issues that are vital to the success and sustainable future of the sector. These include helping build the market for wood and forest products, creating a supportive policy environment, and helping members to become more competitive and successful.

www.confor.org.uk

Funding and Studentship Details

What does the DTP studentship cover?

STIPEND

Our basic PhD funding is for 42 months. During this time, DTP students will receive a tax-free stipend, paid monthly into their personal bank account.

The UKRI minimum doctoral stipend for 2023/24 is £18,622 (FTE).

The UKRI stipend rate generally increases every year in September, in line with the GDP deflator.

DTP students can supplement this stipend with tutoring and demonstrating opportunities: the University of Edinburgh partner schools have large undergraduate populations and there are many opportunities to develop teaching skills.

FEES

The DTP covers
PhD tuition fees for 4
years, as per the UKRI
indicative fee level
(for 2023/24, it is
£4,712).

RESEARCH COSTS

The PhD comes with a standard **Research Training Support Grant (RTSG)** of £3,450 and may include some **Additional Research Costs (ARC)**.

The RTSG can be used to purchase analyses, software, computing, travel, conferences, and other incidental costs of the PhD work. The amount of ARC depends on the nature of the PhD project. PhD supervisors request these funds when they propose PhD projects, and they will be able to answer questions about how these will be used to support the project.

This research money is held in a school account for students to access according to the local school procedures. This funding must be managed by students, although large expenditures will require the approval of the PhD supervisor. The money can be used to cover expenses occuring up to the end of the funded period only (i.e. not after the stipend is over).

CASE

CASE studentships will get additional research money provided by their CASE partner. This money is kept on a research grant account, separately from the RTSG.









DTP Stipend Extension Schemes

There are two opportunities of extending the E4 DTP stipend for fully funded students.

The Professional Internship Programme (PIP)

We offer an up-to-3-month Professional Internship Programme (PIP) that pays stipend while the student is embedded in an organisation outside of their host partner. This can be an academic institution if the work is clearly different from the PhD, but the main goal of this programme is to help students gain experience in non-academic environments so we encourage placements in government, businesses and the third sector.

Normally DTP students will approach a host directly according to their own interests, network or plans and will then submit their internship proposition to the DTP management team for approval. However, we can help students to find an internship if they don't have clear ideas or struggle to find a willing host.

The PIP is flexible and can be done at any time of the PhD although it is recommended in years 2 and 3. It can also be split up in monthly blocks.

Examples and testimonials of PIPs can be found on the <u>E4 DTP website</u>.

See the PIP Application Form and FAQs document in Appendices.

"The skills that I have been able to acquire through this PIP have opened up a range of future career and research possibilities for myself."

Joe did a 3-month PIP at Oak Ridge National Laboratory (ORNL) in Tennessee, USA, in Spring 2023.

The Professional Development Scheme (PDS)

The Professional Development Scheme provides a 2-month stipend extension for DTP students who would have submitted a minimum of two publications as first author by the half of their 4th year.

See the PDS Application Form in Appendices.

Both PIP and PDS are optional and provide extra stipend but NO extra time. You are expected to submit your thesis for examination by 48 months at the maximum.



Additional Funding Schemes

The Overseas Research Visit and Conference Funds (ORVCF)

The E4 DTP holds a fund which can support travel to international conferences and research visits abroad (or PIPs when they are abroad). There are two calls for applications per year which are open to all DTP students in year 1 to 3.5. This fund is to support extra opportunities which were not anticipated and cannot be funded from your RTSG. Activities supported by this fund must happen before the end of the funding period (period covered by stipend).

Examples and testimonials of activities supported by the ORVCF can be found on the $\underline{\text{E4 DTP}}$ website.

See the ORVCF Application guidance in Appendices.

"The experience was invaluable, conversations were stimulating, and I was able to network and interact with world leading experts as well as student peers within my field from locations across the globe."

Thanks to the ORVCF, Hannah attended the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) International Assembly in Rotorua, New Zealand, in Spring 2023.

Additional Funding for Training

If you require specific training not available through the E4 DTP or through NERC that was not anticipated in your budget by your supervisor, the DTP management team will consider ad-hoc requests for additional funding support.



Policies, Regulations and Administrative Processes

UKRI Terms and Conditions of Training Grants

The Doctoral Training Partnership studentships are regulated by the **UKRI Terms and Conditions of Training Grants** to be read in association with the **UKRI Training Grant Guidance.**

The E4 DTP is also subject to some **DTP2 Specific Terms and Conditions** to be read in conjunction with the **DTP2 Guidance and FAQs**.

Please refer to the section 'TGC 8 Absence' of the UKRI Terms and Conditions of Training Grants and of the Training Grant Guidance for matters such as maternity, paternity, parental and adoption Leave (TGC 8.1), sick Leave (TGC 8.2) and annual leave (TGC 8.3). The annual leave allowance is 8 weeks per year. Please do take the leave you are entitled to every year, in agreement with your supervisor.

It is always good to contact the DTP Manager to double-check the interpretation of those regulations if there are any doubts.

These documents can be found on the <u>UKRI website</u> and links to them are on the E4 DTP website too.

www.ukri.org

University of Edinburgh Academic Policies and Regulations

The PhD degree of the E4 DTP students will be awarded by the University of Edinburgh and as such, their PhD studies will be regulated by the University of Edinburgh Academic Policies and Regulations. Students and supervisors will find guidance on postgraduate research assessment, thesis submission and information relevant during the period of study on the Academic Services for Research Students website:

https://www.ed.ac.uk/academic-services/policies-regulations/research-students

This includes three important documents which should be read ahead of the PhD start and referred to as much as needed during the study period:

• The Code of Practise for Supervisors and Research Students which describes their roles and responsibilities.

https://www.ed.ac.uk/files/atoms/files/copsupervisorsresearchstudents.pdf

• The **Degree Regulations and Programmes of Study** sets out the regulatory framework by which PhDs are governed

http://www.drps.ed.ac.uk/23-24/

• The **Postgraduate Assessment Regulations for Research Degrees** which regulates the PhD assessment (thesis examination).

https://www.ed.ac.uk/academic-services/policies-regulations/new-policies/assessment

College of Science and Engineering Procedures

The College of Science and Engineering oversees all requests for changes in the PhD studies and is responsible for the assessment and award of the PhD after the first submission of the thesis.

Students and supervisors will find all information related to progression, concessions, submission and assessment procedures on the **College SharePoint** (requires EASE login).

https://uoe.sharepoint.com/sites/CSCE/AcademicAffairs/SitePages/Home.aspx

There is an administration section on the E4 DTP website for both DTP students and supervisors, which can be accessed using EASE identification codes.

This section contains extensive information on the DTP recruitment, processes and organisation. In particular, application forms and guidance to the DTP stipend extension schemes (PIP and PDS) and Overseas Research Visit and Conference Funds (ORVCF) can be downloaded. The most up-to-date DTP training schedules and contents are also available on those pages.

https://www.ed.ac.uk/e4-dtp/e4dtp-administration

School Policies

DTP students are registered in one of the DTP partner schools (see the list in the above Academic Partners section) and will have to refer to and follow their local processes for matters related to their day-to-day PhD activities such as:

- PhD induction events and PhD generic training
- How to access and use Research Money (RTSG + ARC)
- PhD progression and stepping stones (confirmation process, Annual Reviews, PGR Conferences etc.)
- Supervision matters

- Desk, IT and use of facilities/labs
- Stipend administration

All Schools usually have a PGR handbook, wiki or intranet pages where you can find essential information. PGR School contacts and link to those resources can be found below. in the Contacts section of this handbook.



Students leaving the Ashworth Laboratories, School of Biological Sciences, on the King's Buildings Campus © Paul Dodds - University of Edinburgh,

Training Programme

We have designed the E4 training programme to provide transferable skills, advanced research training, opportunities for multidisciplinary cohort building and links between students, partners and stakeholder sectors. The training plan is built on four pillars that are balanced throughout the DTP:

- Research support, ongoing Training Needs Analysis (TNA) and opportunities for PhD students to engage with potential end users of their research
- Core professional skills training which prepares our students for careers in any sector
- Advanced training in discipline-specific research skills
- Student-led peer activities and professional network building

Flexibility is built into the programme via a modular training design; each student must acquire a minimum of 50 days of training over the course of their PhD, comprising 25 days of core training (generic skills) and 25 days of modular training to be chosen from a wide range of options.

Students are required to record their training attendance in a Training Log (see template in the Appendices) which is to be returned to the DTP Manager annually in August for NERC reporting purposes.

DTP Core Training: Professional and Transferable Skills (25 days)

All training in transferable and professional skills is done as a cohort, as are our network building events. We take advantage of our geographical focus to run training events within Edinburgh throughout the year. Our DTP training also includes a residential course, away from Edinburgh, in each year of the PhD.

This DTP Core Training is compulsory and attendance will be monitored via the DTP Training Log (see also below, the Expectations section).

PhD Generic Training (5 days) - in years 1 to 4

Students take part in **induction events and generic PhD skills training** provided by their host School to ensure integration within their discipline and school-based PhD student cohorts. These events include topics such as research design and planning, data management, fieldwork preparation, health and safety, research ethics, equality, diversity and inclusion, unconscious bias training, wellbeing and tutoring and demonstrating.

Partner Schools or research institutes also have annual conferences at which students are expected to present a poster and/or give a talk.

In year 4, thesis and viva workshops are also provided by schools and the IAD (Institute of Academic Development) to provide support to students in their final stage of PhD.

The UoE Institute for <u>Academic Development (IAD)</u> provides complementary workshops all year round, to help with PhD studies, including PhD management, academic writing, communication and presentation skills and many others.

https://www.ed.ac.uk/institute-academic-development/postgraduate/doctoral

Excellence in NERC-remit research (3 days) - Year 1 Residential Workshop

Our Year 1 residential course at the University of Edinburgh Firbush Outdoor Activity Centre (Loch Tay) aims to **develop an understanding of grand environmental science challenges**, outlines the role of NERC and funding models for addressing these challenges, and helps with cohort building.

Frontiers in Environmental Sciences (3 days total) - Year 1 to 3

A series of six seminars on priority environmental science research topics presented by leading scientists from across the Partnership, including at least two non-HEI partners. Students may be sent background reading in advance for familiarisation with a topic and they lead the post-talk discussion. Each year features a different programme of speakers to cover the full NERC remit, and students from all years are encouraged to attend.

Numeracy, Modelling and Data Management (3 days total) - Year 1 to 3

This course develops **essential skills for effective and reproducible research** through hands-on sessions led by experts from across the Partnership. Topics include open software and data management following NERC policies, data analysis and visualization in Python and R, spatial data analysis with QGIS and a session on qualitative methods. Students who already have expertise in a particular topic can progress directly to advanced courses or assist as demonstrators, gaining valuable teaching experience and giving peer support. Students from later years can use the sessions as drop-in refresher classes.

Career Pathways (2.5 days) - Year 1 to 4

1. Introduction to Career Pathways: Academic and Non-Academic (1 day). Year 1

First-year students are **introduced to different career pathways (academic and non-academic) by alumni and professionals,** and given information and space to think about how to develop a career plan alongside their PhD studies.

2. Advanced Career Pathways (1.5 day). Year 3 to 4

This training offers **flexible options for students to attend career events and fairs, CV and interview workshops** and personal career advice sessions with the <u>University of Edinburgh Careers Service</u>, according to their own needs and plans.

https://www.ed.ac.uk/careers/postgrad/phd

Writing Skills (1 day total) - Year 2 to 4

A full day workshop gives tools to **improve your writing skills and aim at scientific publication.** Optional Writing Retreat days are organised in winter and summer to provide a space to focus on a piece of writing of your choice (paper, chapter etc.).

Media and Outreach (2 days). Year 2 Residential Workshop

Residential course at Newbattle Abbey College, south of Edinburgh focussed on science communication. Neuroscience expert explores how science is explained and why the public may or may not be convinced by scientific arguments depending on their biases, and what to do about **communication challenges**. The Science Director at Our Dynamic Earth discusses communication across the **interfaces between science**, **the media and policy makers**. Tools are given to reflect on and use **social media** to communicate efficiently as a researcher.

Innovation and Impact (2 days). Year 3 Residential Workshop

HEI and non-HEI instructors talk about innovation strategies and impact of research in the business, industry and policy sectors., Topics covered include how to **build networks**, engaging with **industry and policy makers**, and the relevance of **research innovation and impact** with respect to funding.

ECCI Consultancy Innovation Programme (3.5 days) - Year 1 to 4

Students can choose which year they take part in this ECCI-led programme, which highlights pathways to impact in non-HEI environments and serves as a mechanism to match students with businesses for a short Consultancy Innovation Placement scheme.

- An introductory session highlights the value of innovation knowledge, skills and awareness by introducing the programme aims and the work of ECCI. The **10-day Consultancy Innovation Placement scheme** is introduced.
- "Making Your Research Matter", delivered by ClimateXChange, focusses on the connection between research and policy, and in particular how research is used to both support and inform the decisions of Scottish Government, and how to communicate your research effectively to influence policy makers. This is particularly useful for anyone who thinks their research is driven by or can influence the development and implementation of national environmental or sustainability related policies.
- "Business, Project Management and Consultancy Skills" introduces some of the core business skills you will need both for research projects with business partners and in your future. Key principles of negotiating and agreeing a scope and brief for work, defining outputs and deliverables, managing expectations, and how to present the results for maximum impact are covered.
- "Innovation Challenges and Opportunities" will help the students to learn from others who have turned their research into innovation and responded to real world challenges around climate and resources. It will examine key opportunities and challenges for innovation in the context of global climate change, and will help the students to understand how they can connect these with their research.

Science and Society Symposium (1 day) - Year 1 to 4

Students should attend at least one cross-disciplinary conference of their choice to get the opportunity of communicating their research to non-specialised audiences and to build networks and collaboration across disciplines. Example of cross-disciplinary conferences are the Scottish Alliance for Geoscience, Environment and Society conference, the Scottish Ecology Environment and Conservation conference and student-led conferences (e.g. the GeoSciences Gradschool Conference).



DTP students attending training at the ECCI ©SR

DTP Advanced Training (25 days)

In addition to gaining core skills, students tailor their training to their individual needs through our modular Advanced Training programme. The programme is flexible as it responds to feedback from end users and individual Training Needs Analysis (TNA) meetings each year (with the DTP Deputy Director for Training in year 1 and with supervisory teams thereafter).

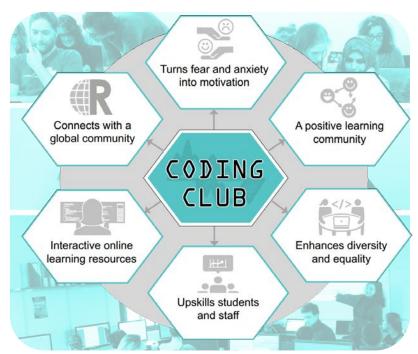
Advanced training courses are available from a wide variety of sources:

- Advanced training courses offered by NERC research centres, including E4 Partners CEH, NEOF and BGS.
- Advanced training from E4 partners such as the National Physical Laboratory, the Met Office, NCAS, SAMS and NCEO.
- The enormous range of undergraduate and taught postgraduate courses offered by UoE. Possibilities will be discussed in TNA meetings and can fill specific gaps, particularly for students from non-standard backgrounds (e.g. transitioning from maths/physics to geoscience/biology) as a foundation for more specialised training.
- Training in statistics, bioinformatics, programming and software engineering offered by leaders in the field at EPCC, Edinburgh Genomics and the student-led Coding Club.
- Modules in spatial data analysis and remote sensing from the MSc in Geographical Information Science, the Coding Club and NCEO partners.
- Advanced course in modelling Earth surface processes (School of GeoSciences Climate, Cryosphere and Landscape Dynamics groups; run already for the SUBITOP EU ITN network).
- Software and high-performance computing courses provided by EPCC in kind, and courses from the Data and Software Carpentry Foundations (EPCC is a member) at cost.
- Funds to access specialised training offered in other NERC-funded DTPs and European Networks. Exchanges with the ENVISION and IAPETUS DTPs are in place.
- Workshops and trainings offered by the Institute of Academic Development at UoE on public speaking, time management, reading scientific papers and a large variety of Professional Skills.
- Workshops organised by various academic societies in many different countries.

Coding Club

<u>Coding Club</u> is a student-led peer-to-peer learning programme coordinated by DTP students who organise weekly workshops and develop online resources. Its current focus is programming in R and Python, spatial analysis and remote sensing quantitative skills. This unique programme, combining peer training and expert guidance from DTP partners, allows students to develop workshops in specific programming skills that they deliver to their peers.

https://ourcodingclub.github.io/



The student-led Coding Club ©I.Myers-Smith and G.Daskalova

Training Needs Analyses (TNA) and Network Analysis

Training Needs Analyses (TNA)

Identification of training needs and reflection on training outcomes are essential components of PhD training. Students will use a **Training Needs Analyses (TNA) tool provided by the Institute for Academic Development** to identify their current skill sets and gaps at the start of year 1.

https://www.ed.ac.uk/institute-academic-development/postgraduate/doctoral

Individual TNA meetings will be held each year, with the DTP Deputy Director for Training in year 1 and with supervisory team thereafter. The TNA process is guided by:

- discussion between the student and their supervisory team to identify skills needs and potential career pathways;
- end user input collated by the Training Management Board (TMB) on key skills required for employment;
- the **Vitae Researcher Development Framework** (RDF).

https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework

Network Analysis

Students are encouraged to join groups and networks with common interests, which can provide helpful resources and support during the studies. This can be peer-support groups, research groups or wider networks, beyond the school and university, related to their research topic, other interests and/or personal situation.

As part of their annual TNA, students will be required to look for and identify such opportunities, and check how they can join these groups.

Training needs and network information already identified are to be entered on the TNA form on Tab 4 & 5 of the Training and Outreach Log (see Appendices), in advance of the annual TNA meeting and updated thereafter.

Advice on Learning and Development

Everybody learns in a different way, and not everybody learns best in a formal training course! These online tests will help students to identify the type/style of learning that is right for them:

- Visual-Audio–Kinaesthetic learning preference: What's Your Learning Style?
 http://www.educationplanner.org/students/self-assessments/learning-styles-quiz.shtml
- Activist, Reflector-Theorist, Pragmatist learning style:

https://www.mint-hr.com/mumford.html

• Students should also complete the Training Needs Analysis worksheet available via the Institute of Academic Development, which is based on the Vitae Researcher Development Framework (see above 'Training Needs Analyses'), in order to understand the skills a researcher needs.

When considering "training" and how it can be relevant to a PhD, it is useful to think about all forms of Learning and Development (i.e. not just training courses!), e.g.:

- workshops and online courses
- seminars and research groups
- 1:1 coaching/mentoring
- reading in one's own time / watching online videos
- conferences and poster sessions
- training through research: working in a different lab or institute
- networking with other students in related disciplines
- work placements / shadowing / internships
- volunteering and outreach
- tutoring and demonstrating



The E4 DTP X account (ex-Twitter) exists to help you share and promote your PhD successes and experiences. Follow and tag @e3dtp

Expectations

The E4 DTP has been fortunate to have been awarded 18 studentships per year until 2024 (with 9 extras in 2023). This represents a significant investment from the Natural Environment Research Council to ensure that our DTP is successfully training students for careers in a wide variety of fields. **Therefore it is only natural that NERC expects us to report closely on the good use of that money:** in particular we have promised to deliver a training environment for our students and NERC will use reporting to ensure we live up to our promises. We aim to deliver an outstanding training environment but in exchange for a valuable PhD (approximately £90k per student) we do expect both students and supervisors to meet some expectations outlined below.

From Students

We are delighted that you have chosen to do a PhD within the E4 DTP. Our DTP does not simply involve working on your PhD project. NERC also expects you to engage in training to ensure you have a broad range of both transferable and project-specific skills at the end of your PhD. We expect you to:

- **1. Engage with your PhD and meet with your supervisor regularly.** Comply with the UoE Code of Practise for Supervisors and Research Students (see the above University of Edinburgh Academic Policies and Regulations section)
- **2. Tell us about any issues** which might hinder your progress as soon as they arise so we can work out a solution together.
- 3. Complete your 50 days of training (including attending the core training courses).
- **4. Record immediately and accurately all your training and outreach activities** on the Training Log (see Appendices): this includes conferences, public engagement events, publications, awards and prizes etc. This information is fed back to NERC and is an essential component of our reporting to our funder.
- **5. Report your publications, awards and other successes immediately** to the DTP Manager so we can celebrate and promote on our website/social media channels.
- 6. Complete and submit your reporting on time. This includes:
 - Annual Training Log (including the annual TNA see Appendices)
 - Researchfish (NERC online reporting system on research content and publications)
 - If you receive funding from our PIP, ORVCF or other DTP discretionary fund
- **7. Read and respond to PGR and DTP emails** during your PhD and after you graduate (in particular to provide post-graduation and destination data required by NERC)
- **8. Manage your research money** (RTSG and ARC) and not go over budget. Keep separate track of additional money you might be awarded out with the DTP (e.g. CASE money or external funds you apply for).
- **9.** If you publish a paper, make sure you acknowledge the NERC grant number: "Funding for this research was provided by NERC through an E4 DTP studentship (NE/ S007407/1)."
- **10. We expect the highest standards of research integrity.** Please read:

We encourage students to **contribute to the management of DTP** by sitting on the Student Advisory Board and providing feedback on training.

https://www.ed.ac.uk/science-engineering/research/research-ethics/research-misconduct

From Supervisors

The E4 DTP recruits truly outstanding students and there are more potential supervisors than studentships. Recruiting a PhD candidate means supervisors agree to several responsibilities:

- **1. You are expected to provide high quality research supervision for the student.** This includes:
 - Meeting students regularly (at least at the minimum frequency expected by your school)
 - Responding to student emails in a timely manner
 - Filling in student reporting forms (e.g., annual reports)
 - Conducting Training Needs Analyses (TNAs) in years 2 and 3
- **2. Training is a core part of an E4 DTP PhD.** If your PhD student systematically fails to attend training then you may be prohibited from recruiting students in future DTP rounds.
- **3.** We expect the highest standards of research integrity. Please read: https://www.ed.ac.uk/science-engineering/research/research-ethics/research-misconduct
- 4. We expect you to read and respond to administrative emails from the PGR Office and the DTP manager.
- 5. Any publication of a paper including a NERC DTP student as a first or co-author that involved work while the student was supported by the DTP should acknowledge the NERC grant number: "Funding for this research was provided by NERC through an E4 DTP studentship (NE/S007407/1)."
- **6.** Harassment and bullying of PhD students will not be tolerated. All supervisors must read the UoE Code of Practise for Supervisors and Research Students as well as the UoE Dignity and Respect Policy prior to recruiting a student:

https://www.ed.ac.uk/sites/default/files/atoms/files/dignity_and_respect_ https://www.ed.ac.uk/equality-diversity/respect/guidance https://www.ed.ac.uk/files/atoms/files/copsupervisorsresearchstudents.pdf

7. Serve on recruitment panels and assist with training delivery as required.









E4 DTP Management

External Advisory Board (EAB)

The External Advisory Panel is composed of leaders in a variety of academic, business, charity and government organisations and is intended to help the DTP provide training that best enable our students to move into exciting, interesting careers beyond their PhD. Meeting frequency: once a year.

Student Advisory Board (SAB)

The Student Advisory Panel is composed of DTP students and provides student feedback to the DTP management team. It can suggest changes to the DTP training and other components. Any DTP student can join the SAP at any time, on a voluntary basis.

Meeting frequency: once a year.

Widening Participation Panel (WPP)

The Widening
Participation Panel
provides advice
on EDI and WP
pratices across the
DTP activities and
particularly in relation
with its recruitment
process.

Meeting frequency: as required during the recruitment process.

Core Management Board (CMB)

The Core Management Board is composed of the Director, the two Deputy Directors and the Manager. It is responsible for day to day running of the DTP.

Meeting frequency: monthly and on an ad-hoc basis as necessary.

Recruitment Management Board (RMB)

The Recruitment Management
Board oversees the recruitment
process but also manages
partner engagement via
multidisciplinary projects,
project matchmaking events,
and monitors the distribution of
studentships to a broad range of
topics and partners.
The RMB is chaired by the DTP

Deputy Director for Recruitment,
Partners and End-users.

Meeting frequency: three times a year.

Training Management Board (TMB)

The Training
Management Board
is responsible for
monitoring training and
implementing changes
to training in response
to feedback from
students, partners, and
external panels.
The TMB is chaired by
the DTP Deputy Director
for Training.

Meeting frequency: once a year.

Contacts

E4 DTP Management Team contacts



Richard Essery
NERC E4 DTP Director
Professor of CryosphereAtmosphere Interactions
School of GeoSciences
Crew Building, King's Buildings,
Room 312
richard.essery@ed.ac.uk



Emma Cunningham

NERC E4 DTP Deputy

Director (Recruitment,

Partners and End-users)

Professor of Ecology and

Disease - School of Biological

Sciences

Ashworth Building, King's

Buildings, Room 406

e.cunningham@ed.ac.uk



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Cris Blyth
E4 DTP Support
Administrator
School of GeoSciences
Grant Institute, King's
Buildings, Room 350B
cris.blyth@ed.ac.uk

PGR Office contacts in UoE Schools

UoE School	PGR Office Contacts	Links to School intranet resources for PGR students
School of GeoSciences	pgrsupport.geos@ed.ac.uk Tel. +44 (0)131 650 8556 Room 350B, Grant Institute, King's Buildings	School of GeoSciences <u>PGR Student Information Hub</u>
School of Biological Sciences	<u>Grad.biol@ed.ac.uk</u> Tel. +44 (0) 131 650 7808 Mary Brück Building, King's Buildings	School of Biological Sciences <u>Graduate School wiki page</u>
School of Chemistry	Chemistry.gradschool@ed.ac.uk Tel: +44 (0)131 650 4724 Room 247, Joseph Black Building, King's Buildings	School of Chemistry PGR Sharepoint
School of Engineering	EngGradOffice@ed.ac.uk Tel. +44 (0) 131 6 519023 or 507815 1st Floor Sanderson Building, King's Buildings	School of Engineering PGR wiki
School of Physics and Astronomy	gradschool@ph.ed.ac.uk Tel: +44 (0)131 650 5812 Room 4209, JCMB, Kingʻs Buildings	School of Physics and Astronomy Graduate School wiki
School of Mathematics	pgresearch@maths.ed.ac.uk Tel. +44 (0) 131 650 5085 Room 5319, JCMB, Kingʻs Buildings	School of Maths intranet Graduate School section
School of informatics	<u>IGS@inf.ed.ac.uk</u> Tel: +44 (0) 131 6509989 Room 5.01, Appleton Tower, Central Campus	Informatics Graduate School Intranet webpages
Royal (Dick) School of Veterinary Studies	RDSVS.PGR.Admin@ed.ac.uk Tel: +44 (0)131 651 9192 or 9194 Roslin Institute, Easter Bush Campus	<u>Vet School Postgraduate student handbook</u>

DTP Partners List and Main Contacts

Institution/Company	Contact 1	Contact 2
UoE / School of GeoSciences	<u>Prof Richard Essery</u>	<u>Dr Massimo Bollasina</u>
UoE / School of Biological Sciences / IEB	Pr Emma Cunningham	Dr Craig Walling
UoE / School of Chemistry	<u>Dr Nicholle Bell</u>	
UoE / School of Engineering	Dr Athanasios Angeloudis	<u>Dr Andrea Semiao</u>
UoE / School of Informatics	<u>Dr Oisin MacAodha</u>	
UoE / School of Mathematics	<u>Prof Finn Lindgren</u>	Prof Jacques Vanneste
UoE / School of Physics & Astronomy	Prof Charles Cockell	<u>Dr Sean McMahon</u>
UoE / Royal (Dick) School of Veterinary Studies / Roslin Institute	<u>Prof Liz Baggs</u>	<u>Dr Jo Stevens</u>
Edinburgh Parallel Computing Centre (EPCC)	<u>Dr Rosa Filgueira</u>	<u>Dr David Henty</u>
Scottish Association for Marine Science (SAMS)	<u>Dr Bhavani Narayanaswamy</u>	<u>Prof Keith Davidson</u>
Edinburgh Centre for Carbon Innovation (ECCI)	Kristine Hopfe	<u>Jamie Brogan</u>
NERC British Geological Survey (BGS)	<u>Dr Margarita Segou</u>	<u>Dr Jonathan Naden</u>
NERC Centre for Ecology & Hydrology (CEH)	<u>Dr Lindsay F. Banin</u>	<u>Frances Kathryn Wood</u>
National Centre for Atmos- pheric Science (NCAS)	<u>Dr Louise Whitehouse</u>	
Forest Research (FR)	<u>Dr Mike Perks</u>	<u>Dr Bruce Nicoll</u>
Scottish Universities Environ- mental Research Centre (SUERC)	<u>Prof Darren Mark</u>	<u>Prof Derek Fabel</u>
National Museum Scotland (NMS)	<u>Dr Nick Fraser</u> 26	<u>Dr Rachel Walcott</u>

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Scotland's Rural College (SRUC)	<u>Dr Eileen Wall</u>	Dawn Latto
Biomathematics and Statistics Scotland (BioSS)	<u>Dr Glenn Marion</u>	<u>Dr Helen Kettle</u>
National Centre for Earth Observation (NCEO)	<u>Prof John Remedios</u>	<u>Uzma Saeed</u>
Royal Botanic Garden Edinburgh (RBGE)	Prof Peter Hollingsworth	<u>Dr Antje Ahrends</u>
Scottish Environmental Protection Agency (SEPA)	<u>Dr Peter Singleton</u>	Lesley Whyte
National Trust for Scotland (NTS)	<u>Dr Stuart Brooks</u>	
Royal Society for the Protection Birds (RSPB)	<u>Dr Graeme Buchanan</u>	Prof Jeremy Wilson
Scottish Natural Heritage (SNH)	Prof Des Thompson	<u>David Genney</u>
Scottish Wildlife Trust (SWT)	Nicky Langridge-Smith	Richard Siller
Carbomap	<u>Prof Iain Woodhouse</u>	
British Trust for Ornithology (BTO)	<u>Dr Rob Robinson</u>	
Met Office (MET)	<u>Verity Payne</u>	Fiona O'Connor
Space Intelligence	<u>Dr Murray Collins</u>	
CONFOR	Andrew Heald	
National Physical Laboratory (NPL)	<u>Dr Tim Arnold</u>	<u>Linden Fradet</u>

PIP Application form - page 1



E4 DTP - Professional Internship Programme (PIP) Application

Students within the E4 DTP are encouraged to do a placement at an external organisation for up to three months during their PhD. This placement can be located at a range of institutions including with one of our DTP partners, an additional research organisation or in industry, business, with a policy maker, media, government agency, primary/secondary education organisations or with a charity. The aim is to broaden the skills and experience acquired during the PhD, and help form connections outside the DTP; spending time working in a different sector should add great value to the PhD, maximising the impact of the training, and enhancing opportunities for successful and varied career paths. Students on a placement are eligible for 3 months funding over and above the 3.5 years of funding available via their PhD. That is, the host organisation is not expected to pay the student salary.

Please fill in the boxes below and send to <u>e4dtp.support@ed.ac.uk</u>. The DTP management team will review the case and respond within 2 weeks. Please expand text boxes as necessary, but the entire document should not exceed 2 pages (Arial 11 point font).

In addition, a letter in pdf form from the host organisation, signed and on letterhead, should also be sent to the DTP manager. This letter should state the support of the host organisation and state any contributions (i.e., office space, access to data or expertise) the host organisation is willing to make. Applications without a support letter will not be considered.

Name and	address of	Host Orga	nisation			
ntended Ad	ctivities at	Host Orgar	nisation (ex	pand as ne	eded):	

PIP Application form - page 2

Expected sta	rt date of the internship:
Expected en	d date of the internship:
Signature of	Student and date:
Signature of	Supervisor and date*:
Signature of	
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E4 DTP- Professional Internship Programme (PIP)- FAQs

When can I do the PIP?

The PIP is intended for students in their 3rd or 4th year but is also possible while in 2nd year if a suitable occasion arises. The PIP must be done within your PhD maximum end date and before you submit your thesis.

Can I split the 3 months?

The 3 months can be split into monthly blocks.

Can I do a PIP in Edinburgh?

Yes, you don't have to necessarily leave Edinburgh or the UK to do a PIP. You can do it with any local company or institution. It can also be done remotely.

Can I get additional financial help to cover travel costs within a PIP?

If your intended internship is abroad and contributes to create new research collaborations, you can apply for the DTP Overseas Research Visit & Conference Funds (ORVCF) together with your PIP to get additional financial help. This fund has 2 application rounds a year (deadlines 1 December and 1 June) and is on a competitive basis. Please see the ORVCF Application guidance document for more details on this fund and how to apply.

Will my maximum end date be amended accordingly to the length of the PIP?

No. Because the PIP is considered part of your PhD, you won't get interrupted and your end date won't be extended. You will just get extra stipend to cover the internship.

I am going to do a 3-month paid placement, can it count as a PIP?

If you undertake an internship or any other projects or placements with stipend paid by the host institution, this will not count as a PIP because the funding comes from outside the DTP. That means you will still have your PIP to use if you wish to, later on.

For such paid internships, an interruption of PhD studies will be required and we will suspend your NERC stipend. Both your funding and maximum end date will be extended accordingly.

Does it have to be totally different from my research?

The PIP is an opportunity to try things you haven't been doing yet and get experience you don't have. This can happen within your research area and it is not a problem if the PIP is related to your PhD subject in some way. You might even get the opportunity to collect useful data you wouldn't have expected and that is fine. However what we don't want is you continue working on your PhD and own research during a PIP or use that time to write your thesis.

Does a UKRI Policy internship count as a PIP?

For E3 DTP students it does not, as stipend and costs will be refunded to the DTP by NERC. For E4 DTP Students, NERC will not provide such funding anymore meaning any RCUK Policy internship will have to be taken from your PIP allowance.

Will I be required to provide a report after the PIP?

Yes, we will ask you to send a 2-page report within a month after your PIP ends. It should include a description of your host and of the activities you have been doing as well as some reflection on what the PIP brought to you (experience, skills, network etc.). It should include relevant logos and one or two photos as well.



E4 DTP: Application for a Professional Development Scholarship (PDS)

The E4 DTP Professional Development Scholarship (PDS) is intended to support DTP students who have prepared and submitted for publication a minimum of 2 first-author papers to peer-reviewed journals during their PhD, by providing a 2-month additional stipend.

This scheme does not provide any extra time and the submission deadline will remain unchanged, unless the additional 2 months of PDS stipend takes you beyond your current submission deadline (e.g. in case in you have been granted any funded extensions for other purposes).

You are eligible to apply if you comply with all the following:

- You are an E4 DTP student whose funding is paid by E4 (even partially)
- You are in your 4th year of study for full-time students (or 7th for part-time students)
- You are nearing the end of your stipend by 6 to 2 months maximum
- You can prove that you have submitted (or will be submitting) 2 papers on which you are first author, for publication, by the end of your funding (i.e. end of your stipend)
 - The papers must be submitted to a peer-reviewed journal.
 - The papers must have been prepared during your PhD.
 - The papers must be related to things done during your PhD.

For administrative reasons, the application must be sent at least 2 months before the end of funding (i.e. end of stipend) is reached. However, any publication which is at final preparation stage and intended to be submitted within this 2-month period can be included.

Student Name:	Matriculation No:
Funding end date:	Thesis expected submission date:
Please describe the papers you have su	bmitted/intend to submit below.
	39

PAPER	V.1
Submitted:	Yes - Date :
	Was the paper accepted for publication? ☐ Yes ☐ No ☐ Not yet known
	No – Intended date of submission:
Paper Referen	ce including the journal or proceedings reference (and URL/DOI if the article is published already)
Paper Abstrac	t
Extend box as	
How does this	paper relate to things done during your PhD?
Extend box as	needed
L	
PAPER	V.2
Submitted:	☐ Yes – Date :
	Was the paper accepted for publication? ☐Yes ☐No ☐Not yet known
	□ No – Intended date of submission:
	Please attach your final draft paper to your application.
Paper Referen	ce including the journal or proceedings reference (and URL/DOI if the article is published already)
Paper Abstrac	t

PDS Application Form - page 3

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Name of supervisor and s	ignature:	
Student signature:		
Date:		
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E4 DTP - Professional Development Scheme (PDS) - FAQs

When can I apply to the PDS?

The PDS can be applied for from the beginning of your 4th year of study, as soon as you can prove that you have submitted 2 first-author papers which were written during your PhD, and no later than 2 months before the end of your stipend.

What if I have only one paper submitted by the end of my funding? The PDS gives 2 extra months of stipend for 2 papers submitted. There is no provision for providing 1 month of extra stipend for 1 paper.

What if my funding end date already matches my submission deadline? What if the PDS stipend extension takes me beyond my current submission deadline?

In this case, the PDS will extend your funding beyond your current deadline and we will need to request an extension of your submission deadline to College to match this new funding end date. Deadline extensions can only be processed near the submission deadline (about 3-4 months before).

Can a paper on my Master research be considered for a PDS application?

Only if your paper was written during your PhD studies and if it is related to things done during your PhD studies (so not if your Master was on a completely different topic). The PDS scheme is to compensate time spent on writing a paper during your PhD studies in support of your PhD studies. One aim of this scheme is to encourage you to write papers and include them in your final thesis as chapters. This scheme is not intended to support you while spending time to write papers which are not related to your PhD thesis or topic (and which could also potentially be out with of the NERC research remit).

Do I need to be the first author on the paper?

Yes. There can be co-authors.

How do I prove that I will submit a paper in the next 2 months?

For administrative reasons, we need to receive your PDS application at least 2 months before your stipend ends so that we can extend your stipend in time. Hence, in some cases, we will accept papers that you are planning to submit within the next 2 months, but you will need to submit your final draft with the application for verification. We will mainly trust that you are on track to submit the paper and may also double-check how close you are from submission with your supervisors.

Do papers need to be submitted to a peer-reviewed journal?

Yes



E4 DTP Overseas Research Visit & Conference Fund (ORVCF)

Overview

The DTP provides an Overseas Research Visit & Conference Fund (ORVCF) that enables students to gain experience in an overseas research environment and/or present their work at an international conference. These funds are specifically targeted to stimulate new collaborations and expand network. They are not intended to top up standard RTSG funding.

Eligibility

Both DTP and NPIF PhD students are eligible to apply as long as they have not submitted yet and are still receiving stipend from NERC and will still be receiving stipend during the whole duration of the visit or conference. This is because the DTP cannot provide additional funds to students once their stipend is over or once they have submitted their thesis for examination.

Timing

There are two rounds per year with submission deadlines of **June 1**st and **December 1**st. A small panel will be convened to evaluate proposals and notify students of results within 2 to 3 weeks.

When these two fixed deadlines are inappropriate, urgency applications, e.g., for international conferences, out with these calls will be considered by the panel.

Funding level

There is approximately £5,000 in funding to distribute for each call.

Important notes

- Both value for money and evidence of match funding will be considered when ranking applications.
- Research visits will receive priority over conference travel but conference travel will be supported if funds are available.
- o Conference travel costs: funding is only available if the student is presenting (poster or talk).
- Requests are capped as below:
 - Research visits: maximum of £1,500 (we can consider higher requests if duly justified)
 - Conferences: European conferences will be funded to a maximum of £500 and conferences on other continents up to £750.

Report

Successful candidates will be required to submit a one-page report within a month following their return trip.

• For research visits: the report, which will be placed on the DTP website, should be written in general terms (press release style), include a photo and appropriate logos (E4 DTP and host institution if relevant).

• **For international conferences:** the report will give brief details on the conference with its logo and include the abstract. It can also include a photo.

FAQs

- o Can money be requested for a trip that has happened already? No, it cannot.
- Can money be used to support a PIP? Yes it can, as long as the PIP is overseas. In that case, we
 will need to have the PIP application together with your ORVCF application and the host letter
 will serve both applications (no need to provide two different letters).
- o **Is there a limit on how many times we can apply during the whole PhD?** No, but if you have already been successful in getting a visit or conference funded, you will unlikely get another one (except if the fund is undersubscribed).
- Is it an absolute requirement to present our work at a conference in order to apply for conference travel support? Yes it is.
- What kind of expenses can be included in the budget? You can include travel, accommodation
 and meal costs (meal costs for short trips only) as well as small research equipment or conference
 registration fees as relevant.
- What if I don't use all the budget I asked for or cannot go in the end? Can I use the money for something else? If you cannot use the money for the requested purpose (e.g. the conference is cancelled) then we will need to take the money back. It cannot be used for something else than ORVCF-related.

Case for support

Please include a case for support to your application that explains what you will do on your overseas visit and how the collaboration extends your PhD work OR describe the conference and the work you are going to present and explain how you will benefit from going.

In both cases, budget with a breakdown of anticipated costs and a justification of resources must be included (with any match-funding from other sources such as RTSG or other grants you've applied to).

The case for support, budget, justification and any figures or references needs to fit on one side of A4, with 2cm margins and minimum Arial 11pt font (do not use Arial narrow).

How to apply

To apply for this funding, DTP students need to provide:

- 1. A case for support including a budget with justification of resources (see above).
- 2. A For research visits: a **letter from the overseas partner** explaining how the student would be supported in a collaborative project.

OR

<u>B - For conference travel:</u> a proof that your paper or poster has been accepted (if available).

Please send both documents to the E4 DTP team at <u>e4dtp.support@ed.ac.uk</u> by the **June 1**st or **December 1**st deadlines.

Name of S	tudent			1
	P Core Training - Professional and Transferable Skills - Should 6	aual i	DE DAVE	0.0
וט	r Core Training - Professional and Transferable Skins - Should 6	quai 2	ZO DATO	0.0
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Parket And Street Ave.	ering a date of attendance in the pink cells (column E- only on the format **/**/***) will update the total number of training d			Committee of the Commit
20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	sining (in black), please enter a count in days in the blue cells if empty (column D) so that the number can be added to the total. but training session would be considered 0.5 day. Do not put less than 0.5.			
L.g. 0 2 110	in training session would be considered all day . Do not put less than all.	Count	Date attended	
Year	Description of training	Count (in days)	Date attended (**/**/****)	Total
1-4	PhD Generic Training - Should equal 5 DAYS	5.0		0.0
1	DTP Induction Individual meetings with DTP Manager + welcome session	0.5		150,00
1	School PhD Training Provided by Schools (includes induction events and workshops such as	2.5		
	Research Planning and Management, Fieldwork preparation, Health and Safety, Research Ethics, Facilities Tour, Tutoring and Demonstrating,			
	Computing, University Services, Wellbeing etc.)	200		
1-3	Equality, Diversity and Inclusion / Unconscious Bias Provided by Schools as part as the generic PhD training (or attend in GeoSciences)	0.5		
1-3	PGR Conference Annual PGR Conference organised by Schools or Institutes	1		
1-4	IAD Training for PhD students Flexible training - specify count in days in column D			
1	Excellence in NERC-remit Research - Equals 2 DAYS	2.0		0.0
1	Year 1 Residential All Year 1 DTP students at Firbush Outdoor Centre - October	2		
1-3	Numeracy, Modelling and Data Management - Equals 3 DAYS	3.0		0.0
1	Python Session 1/2	0.5		
1-3 1-3	Python Session 2/2 R Session 1/2	0.5		
1-3	R Session 2/2	0.5		
1-3	GIS Session 1/1	0.5		
1-3	Qualitative Methods Session 1/1	0.5		
1-3	Frontiers in Environmental Sciences - Equals 3 DAYS	3.0		0.0
1-3	Seminar 1 Seminar 2 Included in the Firbush Residential Training Workshop	0.5		
1-3	Seminar 3	0.5		
1-3	Seminar 4	0.5		
1-3	Seminar 5	0.5		
1-3	Seminar 6	0.5		0.0
1-4	Career Pathways - Should equal 2.5 DAYS	2.5		0.0
1	1. Introduction to Career Pathways - Year 1 - Equals 1 DAY Introduction to Career Pathways (Academic) - Compulsory Year 1	0.5		
1	Introduction to Career Pathways (Academic) - Compulsory Year 1 Introduction to Career Pathways (Non-Academic Careers) - Compulsory Year 1	0.5		
2-4	2. Advanced Career Pathways - Year 3-4 - Equals 1.5 DAY			
3-4	Non-Academic Career Events and Fairs Provided by Schools or Career Service (PhD Horizons)	1		
2-4	Personal Career Advices 1-to-1 meetings with a Career Service consultant	0.5		
3-4	Business or Academic CV IAD / Career Service IAD Career Management Flexible training - specify count in days in column D	0.5		
2-4	Career Service Events and Training Flexible training - specify count in days in column D			
1-4	ECCI Consultancy Innovation Programme- Equals 3 DAYS	3.0		0.0
1	Introduction session Compulsory introduction to the ECCI Training Programme	0.5		
150.44	Project management skills in academia and industry Project management skills	0.5		
1-4 1-4	Make your Research Matter Connection between Research and Policy Communicating Research Communication skills	0.5		
1-4	Funding and Innovation Insight into grant and funding applications	0.5		
1-4	Improving sustainability of research Understand and manage your climate impact	0.5		
1-3	Consultancy Placement Voluntary 10-day placement in business	n/a		
2-3	Writing Skills - Should equal 1.5 DAY	1.5		0.0
2	DTP Writing Workshop Writing for publication	1		
2-4	Academic Grant Workshop Grant writing for academia: the Basics Writing Day Retreats DTP Writing retreats (offered ~4 days a year)	0.5		
2	Media and Outreach - Equals 2 DAYS	2		0.0
2	Year 2 Residential Compulsory Year 2 Residential Training at Newbattle	2		0.0
3	Innovation and Impact - Equals 2 DAYS	2		0.0
3	Year 3 Residential Compulsory Year 3 Residential Training at TBC	2		3.0
2-4	Attendance to cross-disciplinary conferences - Equals 1 DAY	1		0.0
2-4	Conference attendance Can be any cross-disciplinary conference (give details in tab 3)	1		

Please log in all your specialised training throughout your PhD. The overall number of training days required for the Advanced Trequirements. It is your own responsibility to organise attendance Important instructions to fill in the table:		dalised training throughout your PhD.			
1/ You must complete the day count (blue cells - column E) with the length of the till 2/ You must then complete the date of attendance (pink cell - column F) on the for E.g. a 2-hour training session would be considered 0.5 day. Do not put less than 0.5. The overall day count at the top right of the table will update accordingly.	ughout your PhD. In the Advanced Training must be ganise attendance and complete column E) with the length of the nee (pink cell - column F) on the ed 0.5 day. Do not put less than ble will update accordingly.	The overall number of training days required for the Advanced Training must be reached by attending individual training tailored to your personal needs and PhD project's requirements. It is your own responsibility to organise attendance and complete this training according to your individual training plan (discussed at your annual TNA). Important instructions to fill in the table: 1/ You must complete the day count (blue cells - column E) with the length of the training (min 0.5 which is half a day - a 2-hour course will count as 0.5). 2/ You must then complete the date of attendance (pink cell - column F) on the format **/**/**** only. Only put the start date if the course is more than 1 day. E.g. a 2-hour training session would be considered 0.5 day. Do not put less than 0.5. The overall day count at the top right of the table will update accordingly.	I to your persc g plan (discuss course will co f the course is	ed at your annual ThD pured at your annual Thured at one and and and another and and another than 1 day.	oroject's IA).
Year	Location & Provider	Short description	Count (in days)	Date attended (**/**/***)	Rate your training /5
			y.		

PhD Outreach Activities PhD outreach Activities Pho outreach Activities Pho outreach Activities Pho outreach Activities Please log ALL the outreach activities you have been doing during your PhD: e.g., publications, conference attendance, extra fieldwork activities, placement, public engagement, research visits, social medias and media interaction, prize and awards etc. Complete the columns as relevant for each activity. The list of types of activity can be tailored on tab 4 'Do not remove' if necessary.	Notes and feedback on your experience
ic engagement, resea sary.	Provider/Organiser
PhD Outreach Activities ference attendance, extra fieldwork activities, T&D, placement, publicativity can be tailored on tab 4 'Do not remove' if neces	Short description
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ve been doing during elevant for each a	Type of Activity
treach activities you ha	End Date (if relevant)
Please log ALL the our awards etc. Complex	Start Date (or East)

Training and Outreach Log - Tab 4 (TNA) & Tab 5 (Network Analysis)

Name of Student:

Training Needs Analysis (TNA)

E4 DTP Students in Year 1: Talk with your supervisor about training needs for your PhD, fill in the first column of the table below and return the form to the E4 DTP team (e4dtp.support@ed.ac.uk) before your meeting with the E4 DTP Deputy Director for Training (November). Expand and insert rows as necessary. You can also fill in the other columns for any training opportunities that you have already identified.

E4 DTP Students in Year 2 and 3: Discuss any update of the form with your supervisor at the TNA anniversary date (November). Subsequent to this discussion, you MUST send an updated copy of this Training Log to the E4 DTP team (e4dtp.support@ed.ac.uk) by 10 December each year, at the latest.

To help you completing your TNA, you can refer to the IAD TNA template (spreadsheet) which is available to download from the IAD webpage: https://www.ed.ac.uk/institute-academic-development/postgraduate/doctoral (see at the bottom of the page).

Once completed, the training needs to be moved to tab 2 " DTP Advanced Training".

Skills/Training required	Courses/ Ressources identified	Anticipated date of attendance/completion

Name of Student:

Network Analysis

The Network Analysis is to help you think about and identify groups and networks you can join which are relevant to you and which will provide resources and support during your studies. They can be related to your research topic in particular or to your wider scientific interests as well as to your personal interests and situation (e.g. a student carers group).

E4 DTP Students in Year 1: List below the groups and networks you have identified for you in advance of your TNA meeting with the E4 DTP Deputy Director for Training (November).

A helpful starting point to find relevant groups is the open spreadsheet below (you can add any new networks to it as well!). Think of asking your supervisors too (including any external supervisors or CASE partners) and your peers from upper years. Do your own research online.

Research Groups and Seminar Series
Student Societies

E4 DTP Students in Year 2 and 3: Keep the list updated with new networks and groups identified as you go.

Group/network name	Detailed information (how to join, frequency of meetings etc.)	Link or email
e.g. the E4 DTP student group	11 3 17	GeoSciences PGR students Teams
	training; GeoSciences PGR Students Teams	

An electronic version of this handbook is available online on the E4 DTP website. https://www.ed.ac.uk/e4-dtp/e4dtp-administration

This handbook has been created and designed by the E4 DTP team, School of GeoSciences, University of Edinburgh. e4dtp.support@ed.ac.uk

> Image on cover by RomoloTavani/Getty Images Image on Table of contents page from Getty Images

The Edinburgh Earth, Ecology and Environment Doctoral Training Partnership (E4 DTP), led by the School of GeoSciences at the University of Edinburgh, is funded by the British Natural Environment Research Council (NERC) to recruit and train 6 cohorts of PhD students annually between 2019 and 2024.

This handbook is for the DTP students and their supervisors to help them making the most of this research and training programme.

