ACCE DTP STUDENTSHIP HANDBOOK

2026/27

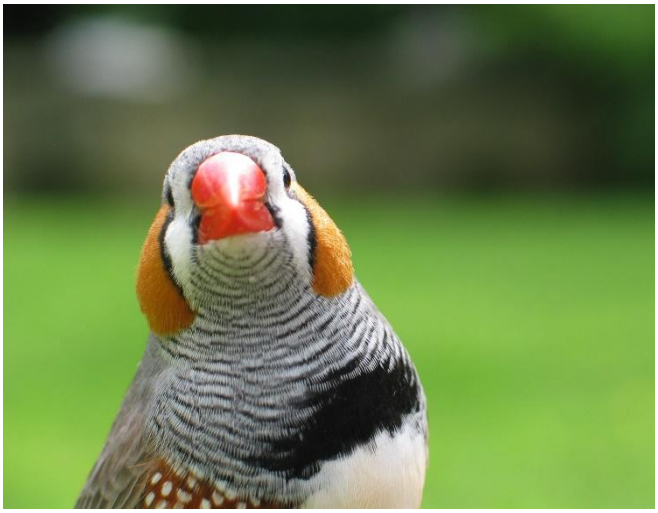
UKRI Natural Environment Research Council

ACCE DTP
Adapting to the Challenges of a Changing Environment

University of Liverpool · University of Sheffield · University of York · UK Centre for Ecology & Hydrology · Natural History Museum

CONTENTS

About ACCE DTP 1
Research Foci 1
ACCE Management 3
ACCE Bespoke training programme 3
Other Required training activities 4
Student-led activities 4
Students' involvement and Representation 5
ACCE Support schemes 5
ACCE Placement support 5
Research lab visits 6
Other support schemes 6
Wellbeing 6
Funding extensions 6
Peer mentoring 6
ACCE record of activity form 6
Funding and costs 7
Research Training Support Grant (RTSG) 7
Enhanced RESEARCH FUNDS for projects with a CASE partner 7
Disability Support Allowance (DSA) 8
Publishing your research 8
ACCE EDI 8
ACCE partner Universities and Departments 9
Contact us 9
Social Media 9



ABOUT ACCE DTP

ACCE (Adapting to the Challenges of a Changing Environment) is a partnership between the Universities of Liverpool, Sheffield and York, the UK Centre for Ecology and Hydrology (UK CEH) and the Natural History Museum (NHM), providing doctoral training in the biological components of the natural environment and related disciplines.

Our aim is to develop motivated, self-assured and multi-skilled PhD students, undertaking cutting edge research and tackling environmental science questions of global significance.

ACCE has a clear emphasis on the **biological component of environmental research**. This biological core, combined with the international standing of the partners in the biological and related fields, makes ACCE an ideal choice if you wish to undertake a PhD in biological environmental research and related disciplines.

By including related disciplines beyond the biological sciences, ACCE is also able to provide a multidisciplinary environment to the benefit of our students, bringing together biologists, mathematicians, engineers, geoscientists, analytical chemists, archaeologists and policy experts.

Our PhD students will not only graduate as great scientists but will also graduate with skills much sought after in today's job market.

RESEARCH FOCI

Our world-class research activities are described within a structure defined by **four foci**. These foci link to NERC's emerging research priorities and "Grand Challenges". We have grouped our research strengths into these foci because they are central to future science innovation, providing novel topics for training early career researchers, as well as delivering essential skills and employability for the next generation of environmental scientists.

The foci are:

1. **Securing ecosystems and their natural capital**
2. **Predicting and mitigating impacts of environmental change**
3. **Understanding the dynamics of biodiversity**
4. **Investigating mechanisms of evolutionary change: genes to communities.**

Securing Ecosystems and their Natural Capital

An area of strength across all ACCE institutions is our research into the fundamental understanding of ecosystem services and resources and how their long-term future can be secured.

Our work includes: (i) sustainability of natural and agricultural ecosystems and their service provision, (ii) linkages between biodiversity and ecosystem function, (iii) quantification of changes in, and threats to, ecosystem services in soils, freshwater, vegetation and marine ecosystems, (iv) securing production of agricultural crops through the management of plant pests, soil fertility and plant breeding, (v) sustainable water management, groundwater protection and restoration, and (vi) policy and management guidance.

Our work also aims to develop conceptual frameworks for the practical guidance needed for protection and restoration of multiple ecosystem services at the landscape scale.

Predicting and Mitigating Impacts of Environmental Change

Our scientists study the impact of anthropogenic environmental change on individuals, populations, communities and ecosystems, with approaches

ranging from physiological processes within leaves, through changes in species richness and distribution, to global carbon dynamics.

We are concerned with the impacts of a range of interacting global change drivers from global warming, precipitation change, extreme climatic events, temporal dynamics and seasonality, as well as non-climate changes such as land-use change and pollution of terrestrial, freshwater and marine ecosystems. Such initiatives are complemented by long-term research providing improved simulation and analyses of the current and future global carbon cycle and climate by developing comprehensive modelling tools that integrate biogeochemical, hydrological and vegetation processes.

Internationally-renowned research by ACCE institutions has contributed to the Intergovernmental Panel on Climate Change, including authorship of chapters, and other international scientific consensus reports.

Understanding the Dynamics of Biodiversity

Global biodiversity underpins ecosystem functioning but is in severe decline in response to the major drivers of invasive species, climate change and habitat degradation. ACCE research is at the forefront of addressing these key issues by understanding the dynamics of single-species, interacting species and communities using theoretical models, lab populations, experimental microcosms and real-world environments.

We place a strong emphasis on quantitative, analytical and computational techniques, such as epidemiological and metapopulation dynamic modelling, bioinformatics, and a range of 'omics technologies. For example, environmental microbiologists within ACCE use molecular techniques such as metagenomic sequencing technology to study bacteriophage and microbial community ecology across natural and managed environments. ACCE behavioural ecologists use proteomics and structural biology to understand chemical communication between mammals. The unique long-term species distribution and abundance databases at CEH underpin our investigations of the spatiotemporal drivers of biodiversity changes.

Investigating Mechanisms of Evolutionary Change: Genes to Communities

All biological processes need to be understood in the context of evolution. ACCE researchers are internationally recognised experts in the field of evolutionary biology, investigating fundamental drivers of gene flow among populations, evolutionary responses of species to rapid environmental change, and the genetic basis of competition, co-evolution and co-operation between species and organisms.

We also use multi-disciplinary approaches to study evolution, for example, through pioneering systems biology approaches to understanding the mechanisms of adaptation of species in polluted environments. Our research is supported by state-of-the-art facilities, for instance in ‘omics research (NERC Environmental Omics Facility jointly managed by the Universities of Liverpool and Sheffield), and ancient DNA techniques (BioArch,York).

ACCE MANAGEMENT

Professor Wayne Dawson (University of Liverpool) is the ACCE Director. The Management Board oversees management of ACCE, and consists of representatives from the three ACCE partner Universities, UKCEH and NHM. This board is advised by student representatives from the Student Committee (SC). The Management Board are supported by the Liverpool, and ACCE partner universities', administrative teams.

ACCE BESPOKE TRAINING PROGRAMME

Some of the highlights of our training approach include:

- Whole-cohort training activities where ACCE students from all institutions come together;
- Cross-institutional postgraduate activities and committees, peer-to-peer training, and online resources that foster an engaged and dynamic postgraduate community;
- Training within a coherent multi-disciplinary environment, such that students are exposed to disciplines in the environmental and biology subject areas with relevant and related fields in mathematics, engineering, geosciences, analytical chemistry, archaeology and policy;
- Opportunities for engagement with industry e.g. providing placements support;
- Bespoke and flexible training combined with compulsory activities to ensure each student has the most appropriate training according to their unique needs;
- Enhanced training opportunities in quantitative skills, 'omics and field methods as well as enhanced professional skills such as policy, careers, and science media.

Our training and PhD research is well placed to address the environmental science skills gaps identified in NERC's skills review, and we have large numbers of staff with expertise in all of the '15 most wanted skills' defined by NERC.

Compulsory core training events are hosted by the ACCE academic partners. Compulsory training for ACCE students includes:

Year 1 students

Careers and Leadership Training

Reproducible Research Training

Year 2 students

Research Impact Training

Year 3 students

Evidence Synthesis training

An ACCE student-led conference **for all students** is also held annually. Other, optional training, may include writing retreats, EDI training and other courses.

A training calendar, updated frequently by the ACCE team, is available on the ACCE website training pages for students to view. In addition, the ACCE administrative team make contact with

relevant cohorts regarding registration for training events, on a regular basis.

ACCE DTP aims to hold the core training events in a different month each year so any students missing the one for their cohort (e.g. due to field work commitments) will be able to attend the following year.

OTHER REQUIRED TRAINING ACTIVITIES

Training Needs Analysis (TNA) is required for all ACCE students, and is provided by the hosting department and University.

Additional Training Options

In addition to the compulsory training, there are many opportunities available to ACCE students to enhance their broader skills and employability. For example:

CAREER & PERSONAL DEVELOPMENT

- Career management skills e.g. networking, career exploration, self-awareness, career choices, proactive skills development, etc.;
- Teaching qualifications and workshops e.g. undertake university teaching workshops or external opportunities such as the Brilliant Club;
- Business and management skills - training, experience and qualifications on various aspects of HR and leadership and development (L&D) - leadership, management, business skills and personal effectiveness. This training could include careers development through professional experience – e.g. internships/placements; volunteer work; attendance at competitions e.g. Your Entrepreneurs Scheme, Vitae GRAD schools, or Leadership in Action;
- Innovation and commercialisation - this could include training or activities which could help translate research ideas into innovative solutions and start up a business venture.

MEDIA AND COMMUNICATION

- Events management, media photography, music industries, new social media, blogging, public relations, television production, radio, etc.;
- Science and policy, e.g. participation in debates, organising talks, blogging, writing public articles, etc.;
- Public engagement of science - ways to engage the public with research e.g. Science Week; Science festivals e.g. Cheltenham Science Festival or Royal Society Science Exhibition;
- Outreach activities – e.g. STEM Ambassadors or Scouse Science Alliance;
- Equality, diversity and inclusion training – this could include training and activities focusing on race, gender and LGBT+ issues.

STUDENT-LED ACTIVITIES

ACCE Student Away Day

The Away Days will be organised and led by ACCE students, who will select the location and activities/topics each year. The ACCE DTP will facilitate these.

Informal Events

ACCE students can convene series of informal events, such as 'Coffee & Careers' talks, hosting external speakers, potentially drawn from our panel of external end-user partners, past ACCE students, and elsewhere, to talk about their career path etc. Students can also organise ACCE breakfasts or coffee mornings for students to meet each other on a regular, informal basis. Students will be responsible for all aspects of the

organisation of these events, including identifying and inviting speakers, with budget requests (e.g. for refreshments) to be approved by the Management Board.

STUDENTS' INVOLVEMENT AND REPRESENTATION

Students can get involved by being elected as members of the ACCE Student Committee (SC). The SC will meet at least twice per year and the Student Committee chair will sit on the ACCE Management Board.

ACCE SUPPORT SCHEMES

ACCE PLACEMENT SUPPORT

Each student will be given an opportunity to undertake a placement for one to three months during the time of their studentship. Placements utilising ACCE placement support will be awarded to students who can demonstrate that the experience will benefit them professionally. The placement should be a training or experiential-learning opportunity which offers significant added value to the doctoral programme (it should not be a continuation of their PhD research project, and the work carried out during the placement should not feature in the student's thesis). Placements should ideally be discrete projects and they must be well planned and managed. Therefore, students seeking placement support from ACCE DTP should think about which organisations to approach, and also consider:

- Their career aspirations;
- The skills they want to develop;
- Opportunities to translate the learning from their own studies into the wider world;
- Practicalities such as the location of the organisation and the feasibility of completing the work within the maximum three months' time awarded.

ACCE placement support covers:

- Additional stipend (beyond the 3.5 years for up to 3 months);
- Travel support – travel to/from the location of the placement;
- Accommodation if you undertake relocation to the location of the placement;
- Other occasional expenses, limited only to local travel or additional travel insurance.

Current placement opportunities that ACCE are made aware of will be advertised on the ACCE placements opportunities webpages.

To formally apply for ACCE placement support students will need to fill in an application form. The application form, together with guidelines for completion, and guidelines for potential placement providers hosting a student through the DTP, are available on the ACCE placements page.

ACCE placement support applications will be evaluated by the ACCE Management Board by agreed criteria. Placement opportunities should be mutually beneficial to the student, the placement provider and to the host University. The following are some of the expected benefits that might accrue from placements facilitated by ACCE:

- Seed new relationships with external partners that might then progress into larger/longer term engagement for the University/academic supervisor and benefit for the partner;
- Improve engagement with the city/ region/community;

- Embed the culture of Knowledge Exchange (KE)/engagement with external partners, students and supervisors;
- Improve students' employability and, hence, levels of recruitment to the partner organisations;
- Benefit for/impact at the external partner.

ACCE students are eligible to apply for placement support from the 12th to the 33rd month of their PhD studentship (to finish by the end of month 36 at the latest). As a condition of receiving ACCE placement support, students are required to provide a post-placement report. More information is available on the ACCE website. Blogs written by previous ACCE students about their experiences on placements are also available on the placements blog page.

Research lab visits

Students will be provided with opportunities to apply for support to facilitate visits to research labs for up to three months to develop new field, lab, or analytical skills relevant to their PhD. Supported lab visits can take place in any lab within or outside the ACCE community, and should be research driven. Funds are available to cover travel and accommodation costs for these visits. Please see the ACCE RLV webpages for more details.

OTHER SUPPORT SCHEMES

Wellbeing

A range of wellbeing services are available for students to access. Please see full details on the ACCE website wellbeing pages. The DTP administrative team can also assist with signposting to services as required.

Funding extensions

The DTP operates a general funding extension application scheme, considering applications for a funding extension on a case-by-case basis, that any ACCE DTP student may apply to if severe unforeseen circumstances have disrupted their work (this can include personal difficulties and poor health, including conditions associated with long covid). Normally applications to the scheme are considered from students in years 3 and 4.

Peer mentoring

Each ACCE student may have a PhD mentor assigned if they wish. Mentors are more experienced PhD students at the host institute. Mentoring will be organised by the hosting institution.

ACCE Record of Activity form

ACCE students are required to maintain a register of all the activities undertaken during their studentship. The ACCE Record of Activity Form (RoA) is an online form that allows students to maintain a log of all training and other professional activities undertaken during their ACCE PhD studentship. The form needs to be completed once per year (usually during the summer).

The RoA will help both the students and ACCE DTP management to:

- Formally record personal development and activities to meet the requirements in the ACCE training programme;
- Create a list of relevant activities for inclusion in a future CV;
- Help ACCE assess the skills gained during the research degree;
- Help plan your further professional development.

Note that this online tool should be used to record all activities within ACCE but will not be a substitute for the formal recording systems at each host institute.

FUNDING AND COSTS

ACCE studentships cover standard student stipend (as set by UKRI) and tuition fees paid directly to each relevant university by NERC.

RESEARCH TRAINING SUPPORT GRANT (RTSG)

Each ACCE student will receive an RTSG (Research Training Support Grant), set by the Management Board. The grant is a contribution towards costs incurred in training research students e.g. the provision of consumables, small equipment, travel, accommodation, etc., which can be used by students to attend ACCE training events and annual meetings. Funding towards fieldwork expenses and exceptional consumables are incorporated into the RTSG, and further funding cannot be requested from NERC. The RTSG can be used to fund conference, workshop, short course and other training sessions' attendance. The RTSG will be provided to the students by the ACCE hosting academic institution.

Eligible RTSG costs

- Standard class rail travel*
- Mileage claimed at local institution rate*
- Economy flights*
- Bus fares*
- Taxis*
- Accommodation at local rates when on PhD business
- Consumables related to the project (incl. software)
- Small portable equipment
- Conference fees and attendance
- Training courses fees and participation charges
- Any research related costs
- A standard laptop if this is not provided by the home University

*When on PhD business (not commuting to work)

ENHANCED RESEARCH FUNDS FOR PROJECTS WITH A CASE PARTNER

ACCE is committed to a minimum of 40% of PhD studentships to be Co-operative Awards in Science and Engineering (CASE) studentships. The CASE scheme aims to promote partnerships between higher education institutions (HEIs) and other bodies, which will enhance the training received by the PhD student and will help the student to gain first-hand experience of work outside a purely academic environment.

For studentships starting in 2024/25 or earlier, the CASE studentship will provide an additional supplement to the research grant of the student by a minimum of £1,000 p.a. for a minimum of three years (e.g., minimum £3,500 additional support for studentships lasting 3.5 years).

The CASE partner must host the student for between three and eighteen months during their PhD when they will undertake work outside the academic environment. This placement does not need to occur in one single period. CASE partners

are expected to meet the extra expenses incurred by the student when visiting and working within their establishment.

DISABILITY SUPPORT ALLOWANCE (DSA)

Disabled Students Allowances (DSA) are intended to help with additional expenditure for the costs of study-related requirements that may be incurred as a result of disability, mental health problems or specific learning difficulties that means additional support is needed to undertake a UKRI funded studentship. The allowances can cover the cost of non-medical personal assistance, items of specialist equipment, extra travel costs and general expenses.

Your host university will undertake the assessment of need and provide costs for the student when they are required. The University will then claim back eligible costs at the end of the academic year from UKRI. Students should contact the relevant Disability Adviser or named contact on disability matters at their University for advice:

University of Sheffield: disability.info@sheffield.ac.uk

University of Liverpool: disteam@liv.ac.uk

University of York: disabilityservices@york.ac.uk

Additional guidance is available on the UKRI website, including the DSA framework.

Publishing your research

Publishing costs are normally covered by a UKRI block grant awarded to each ACCE institution. Please contact acce.dtp@liverpool.ac.uk or your local Institutional Lead for more information. UKRI ask that funding be acknowledged when publishing research papers, normally with the wording: *This work was supported by the Natural Environment Research Council [grant number NE/S00713X/1*].*

**Note that this is the ACCE DTP2 grant code, for students starting 2019/20 – 2024/25.*

ACCE EDI

ACCE is committed to recruiting and supporting students regardless of age, disability, ethnicity, gender, gender identity, sexual orientation, faith or religious belief, pregnancy or maternity, parental or caring responsibilities or career pathway to date.

ACCE was awarded a Flexible Funding award from NERC in 2022, and has undertaken an assessment of the impact of changes made in 2021/22 to its recruitment practices, and explored further changes to implemented in ACCE recruitment from 2024/25 entry onwards. Full details plus a copy of the report written by ACCE's EDI Analyst Dr Rachael McLaughlin, are available on the ACCE EDI webpages.

ACCE PARTNER UNIVERSITIES AND DEPARTMENTS

THE UNIVERSITY OF LIVERPOOL

Institute of Infection, Veterinary and Ecological Sciences

Institute of Life Course and Medical Sciences

Institute of Systems, Molecular and Integrative Biology

School of Environmental Sciences

THE UNIVERSITY OF SHEFFIELD

School of Biosciences

Department of Geography

School of Mathematics and Statistics

Department of Civil and Structural Engineering

Bioengineering

THE UNIVERSITY OF YORK

Department of Biology

Department of Environment and Geography

Department of Archaeology

Department of Chemistry

UK CENTRE FOR ECOLOGY AND HYDROLOGY

NATURAL HISTORY MUSEUM

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SOCIAL MEDIA

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