

POSTGRADUATE RESEARCH SERVICE

## TRAINING PATHWAY SPECIFICATION

Pathway name	Course code (where applicable)	Year
EDESIA PhD Pathway		2020

**NOTE:** Whilst the University will make every effort to offer the training pathway as detailed, changes may sometimes have to be made for reasons outside the University's control (e.g. illness of a member of staff) or because of sabbatical leave.

TP1 TRAINING PATHWAY SUMMARY			
TP1.1	a	<b>SCHOOL(S) OF STUDY</b>	BIO, MED, PHA
	b	<b>FACULTY or FACULTIES</b>	Faculty of Science, Norwich Bioscience Institutes
	c	<b>NAME OF TRAINING PATHWAY LEAD</b>	Professor Ian Clark (BIO)
TP1.2 <i>Note 1</i>	a	<b>PATHWAY TITLE</b>	EDESIA PhD Pathway
	b	<b>COURSE CODE (where applicable)</b>	
	c	<b>FULL/PART-TIME (please specify)</b>	Full-time
	d	<b>LOCATION (UEA Norwich, Distance Learning)</b>	UEA/JIC/EI/QIB rotation
	e	<b>AVAILABLE FROM (date)</b>	October 2020
TP1.3	<b>EXTERNAL INPUT (please list here the input from external organisations e.g. employers, partner institutions into the development of this pathway)</b>		
	JIC, EI, QIB		
TP1.4	<b>FURTHER INFORMATION (web link to further information)</b>	<a href="https://www.uea.ac.uk/study/postgraduate/research-degrees/phds-and-studentships/doctoral-training-partnerships/edesia">https://www.uea.ac.uk/study/postgraduate/research-degrees/phds-and-studentships/doctoral-training-partnerships/edesia</a>	
TP1.5	<b>AVAILABILITY BY AWARD (please tick all that apply)</b>		
	Masters Degrees by Research	<input type="checkbox"/>	Master of Philosophy
	PhD (3-year)	<input type="checkbox"/>	PhD (4-year) ✓
	PhD by Publication	<input type="checkbox"/>	Doctorate in Clinical Psychology
	Doctor of Education / Master of Education	<input type="checkbox"/>	Doctor of Medicine
TP1.6	<b>MANDATORY ELEMENTS OF TRAINING</b>		

There are numerous mandatory training elements incorporated into the EDESIA Plants, Food and Health PhD Training Programme. In the interest of timeliness, most of the mandatory training elements are made available in the first few weeks and months of a studentship. Training in the following is mandatory, some additional Faculty specific training activities may be required:

- Health and Safety (general)
- Computer Orientation
- How to Get Started
- Research Ethics, Integrity & Regulations
- Mental Health Awareness
- Equality, Diversity and Inclusion
- Bullying and Harassment Awareness
- Information Security
- Open Research
- Quality Assurance and Intellectual Property
- Reference Management (Endnote)
- Progress Reporting
- Data & Computational Skills
- Progress Reporting
- Writing your thesis
- Statistical & Experimental Design
- Computational Biology & Big Data Science

*The following EDESIA-specific events are also mandatory:*

- Cohort training
- Journal Club
- EDESIA Seminar Series (student-led)
- EDESIA Conference (Biennial)
- Career Development Transition training

## TP2 PATHWAY LEARNING OBJECTIVES

### TP2.1 Learning Objectives

Through a four-year, rotation-based PhD, EDESIA students will have the opportunity to train in a wide range of disciplines across the translational pathway of nutrition research, ranging from plant science and the mechanistic understanding of nutrition, to clinical trials, population-based studies and public health.

The training pathway is based on the requirements set out in the Vitae Researcher Development Framework (RDF <https://www.vitae.ac.uk/vitae-publications/rdf-related/researcher-development-framework-rdf-vitae.pdf/view>) and the RCUK ‘Statement of Expectations for Postgraduate Training <https://www.ukri.org/files/legacy/skills/statementofexpectation-revisedseptember2016v2-pdf/>’ The RDF is divided into four domains that encompass:

**A** Knowledge and intellectual abilities – *the knowledge needed to do research*

**B** Personal effectiveness – *the qualities needed to be an effective researcher*

**C** Research governance and organisation – *the professionalism required*

**D** Engagement, influence and impact – *the skills needed to work with others and contribute to the wider environment*

The RDF sets out the wide-ranging knowledge, intellectual abilities, techniques and professional standards expected to do research, as well as the personal qualities, knowledge and skills to work with others and ensure the wider impact of research. Within each of the four domains of the RDF there are three sub-domains and associated descriptors. Each descriptor is divided into three to five phases corresponding to learning outcomes.

Students are expected not only to develop as knowledgeable and skilled researchers, capable of carrying out world-leading research, but they are also expected to develop a broader outlook as researchers and to develop a broad range of knowledge, skills and personal attributes which can be applied across a wide range of disciplines and career pathways.

Training elements must be taken to cover each of these learning domains to obtain a minimum of 30 days of training which include the mandatory training. The focus of many of the essential learning objectives will be to support research leading to the production of an excellent thesis. However, it is also important for students to recognise the transferability of these skills into other domains of work. Furthermore, it is also desirable that they engage with additional activities that may not directly support their research but would benefit their potential career destination(s). These, for example, might include engagement with the public.

### TP2.2 How will these learning objectives be reviewed?

In discussion with their supervisory team, each student will complete a Training Needs Analysis at the beginning of their period of study and develop a training and development (T&D) plan for the first 12 months of their research.

Each student will be assigned an experienced academic mentor to support training and progression in the first year. Progress on students learning and development will be reviewed on a regular basis through the progress reporting process of the University.

A Training Needs Analysis (TNA) meeting will be held within the first 8 weeks and a tailored Personal & Professional Development (PPD) Plan established by the student supported by their mentor. Attendance at training, learning and development events will be recorded and progress against the PPD will be reviewed between the supervisory team and PGR at interim or annual progress meetings.

EDESIA PGRs will complete three 10-week projects at different partner institutions (from UEA, JIC, QIB, EI). A short report will be produced by the student following each rotation and the outcomes will be presented in the probationary meeting held after 8 months.

Participation in National and International conferences are expected, and, after training, PGRs will have the opportunity to demonstrate on undergraduate courses. PGRs will also be encouraged to participate in Biotech Yes and i-Teams competitions.

PGRs will attend regular cohort activities including a regular journal club, attended by supervisors, delivery of student-led seminars and they will assist in organising a biennial EDESIA Conference, bringing in National and International speakers to the NRP, and formulating valuable networks.

Supervisory teams hold formal meetings with the student at least every four months to evaluate progress. Prior to each meeting, each student is expected to update their training record and reflect on their TNA and PDP (see section 3.2). The benefit of previous learning activities and the need for additional activities will be discussed at these meetings, particularly at the main annual reviews, which incorporate the probation assessment in the first year.

The supervisory panel will discuss development with the student, as well as future skills and development needs, and add comments to the student's reflective report. If the student's research progress is less than satisfactory, the panel will consider whether focussed development and/or training in particular skills would help to bring the research progress back on track. If the supervisors express any concerns about training and development, these will be reviewed by School or Institute PGR Director in the first instance but where relevant also by the EDESIA Director. The discussion at the main annual reviews is formally recorded on the main review form that is entered onto the student record.

## TP2.3 Training Structure

Much of the mandatory training occurs during the induction in the first few weeks (see section 1.6). To ensure timeliness, most of the other mandatory training elements are covered in the remainder of the first year; mandatory training must be completed before the probationary review.

In the first eight weeks a meeting is held between the supervisory team and the student where a training needs analysis (TNA) is carried out and used to prepare a personal and professional development (PPD) plan, which is formally reviewed at annual progress review (APR) meetings.

In Year-1 EDESIA students will complete three mini-research projects within three different labs of the participating institutes; University of East Anglia, the John Innes Centre, Quadram Institute Bioscience and the Earlham Institute. At the end of each rotation project, the student will write a short research report. Feedback is provided by their mentor, who is an eligible supervisor, and the EDESIA Programme Director(s). Each student will present their work in the probationary meeting, held after 8 months.

Informed from their probationary meeting, during the summer of the first year, each student will write their project proposal in the format of a RCUK BBSRC responsive mode grant application and present their plans verbally to their supervisory committee, peers and associated academics.

As well as their Doctoral Research Project, students will engage in a series of cohort activities, to include a:

- Journal club, attended by supervisors, developing critical analytical skills required to understand data quality and limitations, and key future research needs in nutrition.
- Participation in a series of seminars or visits, inviting and interacting with local experts in plant, food and health research and applications, developing communication and networking opportunities.
- Organisation of a biennial conference to expanding organisational skills and formulation of a valuable network.

Other training elements, whether they are highly recommended for all students or optional, tend to be taken up throughout the second and third years. This enables a more even spread of training and development activities throughout years one, two and three. The activities in the second and third years tend to relate to the more transferable skills (including outreach, teaching, management training and enterprise competitions, for example). EDESIA students will also be encouraged to undertake activities contributing to widening participation and Equality, Diversity and Inclusion, raising awareness of under-represented groups.

The fourth, final year learning and development activities tend to focus more on completing the thesis, preparing for the viva, and gaining skills more directly related to the next likely career destination(s) of a given student (e.g. preparing for interviews and career-specific workshops).

Most of the training activities are provided or procured by the UEA or NBI Learning and Development team. Training opportunities at UEA are documented online: (<https://www.uea.ac.uk/study/postgraduate/research-degrees/personal-and-professional-development>). Everyday resilience training is provided by MIND, the mental health charity.

## TP3 PATHWAY COHERENCE AND EMPLOYABILITY

### TP3.1 Learning Progression

How will progression in terms of skills, knowledge and understanding be reflected in the pathway between activities/courses in any one year and across the years as research degree candidates make progress through their course of study?

Training in year one should focus particularly on mandatory training, and skills that are essential to allow the student to carry out their research. In subsequent years, students will be encouraged to develop the learning outcomes as articulated by the Vitae Researcher Development Framework.

Engagement with learning and development is regularly assessed by a student's supervisory team and formally recorded at the probation meeting and subsequent main annual reviews (see section 2.2). The student is required to comment on how the training has helped their studies, skills and personal development, and on what additional training and development needs have been agreed with the supervisory team. In addition, each student and their supervisor are asked to comment on their satisfaction with the personal and professional development training on offer.

The probation assessment is made after the third rotation review and presentation meetings. This involves an assessment of the progress made by the student based primarily on written scientific reports together with a broader assessment of their learning and development.

Training is also discussed at each interim review meeting, with agreed training needs being formally recorded.

At the end of a studentship, each student's training record will be assessed by the supervisory team to ensure the student has engaged sufficiently with activities and professional skills development. This assessment will be based a review of the electronic training record, the student's Personal Development Plan, and the formal record of the reflections by the student on what they have gained from their training and development activities.

### TP3.2 Feedback Cycle

Please explain how feedback from supervisors and others will support the coherence of the programme. How will this feedback impact on subsequent activities/courses?

Students are supported in their training and development needs throughout their studies. They should revise the analysis throughout the first year with input from their rotation supervisors and their mentor. A formal review should then take place with the support of their supervisory team within the first month of their second year. The agreed form will be formally recorded on the studentship database.

Each student will also draft a Personal Development Plan, which must be completed with the support of their mentor and rotation supervisors. This plan should be revised throughout the first year and formally reviewed with their supervisory team at the time of their first interim review within month four of the second year.

Students can seek additional support from the EDESIA Directors, their Faculty Training Coordinators or the NBI Learning and Development team, the NBI Graduate School Office and PGR Service and the University Careers Service.

Supervisors are encouraged to engage with the support of their student's training and development through various means. Whenever a new student is about to start, their supervisor must attend a briefing session. At this session, supervisors are strongly encouraged to engage fully with their student's training and development needs and the evaluation of activities already undertaken. Indeed, the recording of training needs and reflection are embedded within the formal reporting processes. Specifically, supervisors are required to comment in the main review form whether any action needs to be taken in relation to personal and professional development and research training.

All staff, including eligible supervisors, engage in a structured annual staff performance review and appraisal process. This includes training in objective setting, regular monitoring, feedback, coaching and difficult conversations skills development. There are annual process updates so that all staff understand and work effectively with the requirements for regular review and appraisal. Staff who supervise students will use the same principles of review and feedback, coaching and challenging, and encouraging performance and development with their students, in the same way as they would members of staff.

Feedback on EDESIA training will be reported to the Board and acted on where required.

### TP3.3 Employability

How is employability embedded into the pathway?

All students registered on this pathway will receive an introduction to the University Careers Service (and to the many opportunities/services they offer), including an opportunity to meet their designated PGR Careers Advisor. The importance of being widely employable in the current job market is highlighted at induction in a dedicated PPD/Training Overview session.

The development of transferrable skills will enhance student's employability. The Training Needs Analysis and annual reflective reports will encourage students to conceptualise how their skills are developing, to

identify the skills that they need to maximise their employability in their chosen career and therefore be better placed to be able to respond to the requirements of person specifications when applying for jobs and to give concrete examples of how they can demonstrate that they have acquired these skills.

Training for employability within academia comes from a range of formal courses including manuscript and grant writing, presentation skills, scientific, computing and advance research skills, and from the less formal 'on-the-job' training gained via the student's research experiences, including laboratory technical skills. Broader opportunities include communication, entrepreneurship, innovation, commercialisation, and careers in general. Additional opportunities exist beyond what is listed in the brochure, including teaching activities within and beyond the University, and internships within any sector of employment. The breadth of training and development opportunities allows students to engage in activities that are most pertinent to their potential career destination(s).

EDESIA students will choose a career development transition period at the end of their studies to support their career development; training will be offered to help with this choice.

### Notes

1. Pathways may correspond to a particular degree programme within a School (e.g. Doctorate in Clinical Psychology) or to programmes within a particular Faculty or other Graduate School, or to cross-institutional programmes within a Doctoral Training Partnership.
2. Pathways may choose to specify learning outcomes to be achieved in individual years of the programme or to be achieved by the end of the programme.