POSTGRADUATE RESEARCH SERVICE

TRAINING PATHWAY SPECIFICATION

Pathway name	Course code (where applicable)	Year
JIC/TSL Rotation PhD		2019

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	SCHOOL(S) OF STUDY	BIO
	b	FACULTY or FACULTIES	NBI
	c	NAME OF TRAINING PATHWAY LEAD	Rotation Programme Tutor (Dr Stephen Bornemann)
TP1.2 *Note 1*	a	PATHWAY TITLE	JIC/TSL Rotation PhD
	b	COURSE CODE (where applicable)	
	c	FULL/PART-TIME (please specify)	Full-time
	d	LOCATION (UEA Norwich, Distance Learning)	JIC/TSL within NBI Norwich
	e	AVAILABLE FROM (date)	October 2019

TP1.3	EXTERNAL INPUT (please list here the input from external organisations e.g. employers, partner institutions into the development of this pathway)	
	None	
TP1.4	FURTHER INFORMATION (web link to further information)	
TP1.5	AVAILABILITY BY AWARD (please tick all that apply)	

Masters Degrees by Research		Master of Philosophy	
PhD (3-year)		PhD Integrated Studies (4-year)	✓
PhD by Publication		Doctorate in Clinical Psychology	
Doctor of Education / Master of Education		Doctor of Medicine	

TP1.6	**MANDATORY ELEMENTS OF TRAINING** There are numerous mandatory training elements incorporated into a Bioscience PhD within the Norwich Bioscience Institutes. In the interest of timeliness, most of these are made available in the first few weeks and months of a studentship.

Training in the following is mandatory:
- Health and Safety
- Mental Health Awareness
- Bullying and Harassment
- Equality and Diversity
- Information Security
- Research Ethics, Integrity & Regulations
- Quality Assurance & Intellectual Property
- Computer Orientation
- Training Needs Analyses and Personal Development Plans
- Endnote
- Introduction to 'R'
- Basic Statistics and Design Principles with 'R'
- Progress Reporting
- Rotation Student Retreat
- Journal Club
- Writing Your Thesis

TP2 PATHWAY LEARNING OBJECTIVES

TP2.1 Learning Objectives

This 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 UKRI '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*

Training elements must be taken to cover each of these learning domains to obtain a minimum of 30 days of training that 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 might include engagement with the public, for example.

TP2.2 How will these learning objectives be reviewed?

Each student's learning and development will be reviewed on a regular basis through their existing monitoring procedures. A full-time student has formal meetings with their supervisory team at least every four months. Before each meeting, each student is expected to update their training record which is held electronically on the NBI intranet. Attendance at scheduled events is normally entered automatically onto student records, and additional activities can be entered manually by either the student or the Learning

and Development Coordinator. Each student is expected to reflect on their Training Needs Analysis and Personal Development Plan (see section 3.2) prior to each review meeting. The benefit of previous learning activities and the need for additional activities must be discussed at these meetings, particularly at the main annual reviews, which incorporate the probation assessment in the first year. The discussion at the main annual reviews is formally recorded on the main review form that is entered onto the NBI student record.

TP2.3 Training Structure

Much of the mandatory training occurs during the induction in the first few weeks because core skills are required right from the start (see section 1.6). To ensure timeliness, most of the other mandatory training elements are covered in the remainder of the first year.

The Rotation PhD Programme includes three mini-research projects within three different labs of the participating institutes; the John Innes Centre and The Sainsbury Laboratory. At the end of each rotation project, the student will write a research report. Feedback is provided by their mentor, who is an eligible supervisor, and the Rotation Programme Tutor. Each student will also present their work verbally to their peers and the Rotation Programme Tutor.

During the first month, rotation students from all year-groups (typically 20 students in total) go on a retreat for one day to discuss broad academic topics. The retreat is chaired by the Rotation Programme Tutor. Where possible, retreats incorporate seminars from alumni, providing careers advice from personal experience.

First-year students engage with a journal club. A total of 15 papers published by local researchers are critically discussed with guidance from the Rotation Programme Tutor. The relevant local author is invited immediately after each of the last five sessions to allow a deeper exploration of a paper and its backstory. During the summer of the first year, each student will write their project proposal in the format of a BBSRC responsive mode grant application and present their plans verbally to their supervisory committee and their peers.

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).

The fourth and 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 NBI Learning and Development team in partnership with the NBI Graduate School Executive with support from the NBI Graduate School Office. Many of the other activities are provided by the University. The activities that are available are documented in the NBI PGR Development Programme brochure that is made available to students and supervisors. Additional training opportunities at UEA are documented online (https://www.uea.ac.uk/study/postgraduate/research-degrees/personal-and-professional-development).

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?

Engagement with learning and development is regularly assessed by a student's supervisory team and formally recorded at the first three rotation reviews and the subsequent main annual review (see section 2.2). The student is required to comment on how their training has helped their studies and personal development, and on what additional training 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 at the time of the third rotation review meeting. 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. 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. During the induction, they are guided by the NBI Learning and Development team on how to get the most out of their Training Needs Analysis and Personal Development Plan.

Each student must draft a Training Needs Analysis and complete it within eight weeks of registration. Students are encouraged to use a SWOT analysis to help develop their Training Needs Analysis. 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 NBI Learning and Development team, the NBI Graduate School Office 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 with the relevant NBI PGR Director and/or chair of the NBI Graduate School Executive. 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 NBI full-time staff, which will include all 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.

The NBI Learning and Development team and the NBI Graduate School Office encourage supervisors to provide feedback on training and development opportunities for students through direct contact, the Graduate School Executive, and other forums such as faculty meetings and local learning and development committees.

TP3.3 Employability

How is employability embedded into the pathway?

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, which are supported by the NBI Graduate School Office and the University Careers Service. The breadth of training and development opportunities allows students to engage in activities that are most pertinent to their potential career destination(s).

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.