

FMH Training Pathways for Post-graduate Research (PGR) degrees: PART I, Learning and Developmental Objectives for Post-Graduates

Learning/Developmental Objectives (DOs)

At the completion of the post-graduate degree course in the Faculty of Medicine and Health (FMH), the research degree candidate should be able to provide evidence that they possess skills and understanding to enable them to achieve the following learning/developmental objectives. These are a requirement of the Training pathway associated with their degree course. The DOs are arranged according to Researcher Development Statement (RDS) categories (A – D) of features of a successful researcher.

Provided with these DOs in PART I are:-

- Some suggested training or experience (not prescriptive unless marked '*M'), and always chosen by the candidate to be relevant) which may enable the candidate to achieve the objectives; and
- Examples (not exhaustive) of the sort of evidence which the candidate could cite that they have achieved them. Evidence of attending the indicated training or gaining the experience is not listed but is valid. Training or experience attained prior to registration for this research degree may also be valid. Evidence should be kept by the candidate in a portfolio.

Candidates should also refer to the accompanying PART II: Training Pathways Scheme of suggested training/development

experience for guidance in doing their Training Needs Assessment (TNA) or developing their Personal Development Plan (PDP, see below).

Expected process

Each research degree candidate should complete, in consultation with their supervisory team and if possible more senior research students, a Training Needs Assessment (TNA) within the first 6-8 weeks of their programme. This would evaluate their skills and competencies (discipline-specific and generic) against the requirements of their pathway (the Learning/Development objectives below, PART I). The TNA, and the Training Pathway Scheme (PART II), will help the candidate to draw up a PDP for the following year; this should be recorded on a University-wide document to be uploaded to eVision.

Towards the end of each year of the course and before probation review, the candidate self-certifies their degree of achievement of these objectives, citing evidence including training and experience, which can be partial and building up during the course. Progress towards achieving the objectives should be discussed at the probation review and each annual review meeting with the supervisory team. The supervisory team will be expected to check and possibly rate the student's engagement with the training programme and this will be reviewed by the PGR Directors, the Training Coordinator and the Associate Dean for PGR.

This cycle repeats at APR in years 2 & 3 with the final statement of completed activities/reflection being on the research degree submission form.

Key Acronyms and Abbreviations

DO – Developmental/ Learning Objective of the research degree course

*M – Mandatory training – to be completed in the first year of the course. Much of this will be provided at Induction but some will need to be attended later in Year 1. See PART II.

PDP – Personal Development Plan

TNA – Training Needs Assessment

References and sources for these objectives:

RDS – Researcher Development Statement (2010) by Vitae (<https://www.vitae.ac.uk/>)

RCUK – Research Councils UK Statement of Expectations for Postgraduate Training (2016) <http://www.rcuk.ac.uk/skills/frameworks/>

UEA – UEA Research Degree Education Strategy (2015)

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| Learning/Developmental Objective (DO) [any expectations relating to completion] | Suggested training (T) / experience (E) to help achieve the DO | Examples of suitable evidence of achievement (Progress indicators) | Ref. |
|---|---|--|--------------------|
| RDF Domain A: Have the Knowledge, Intellectual abilities and techniques to do research | | | |
| A1. Demonstrate knowledge of recent advances within your own research area and in related areas, and areas of uncertainty [by end of Yr1]. | T : Literature searching / Critical Reviewing of Research Papers / Critical thinking E: Participation in research group/conference discussions | Completion of literature review appropriate for probation review; | RDS UEA |
| A2. Use appropriate methods to find, manage and evaluate published [and unpublished] research already done or ongoing in the area/s of the project [by end of Yr1]. | T : Info skills@UEA (*M) ; Literature searching / Bibliographic software / MSc module on Systematic reviewing; E: Participation in journal clubs | Literature search and survey in probation review document/ thesis; Use software to manage, update and cite references; | RDS UEA |
| A3. Explain the theoretical framework/s in which the research project is based, and justify choice of methodologies to achieve the research aims. | T: Research philosophy, models & design / Masters modules, incl. previous; E: presentation of research plan to peers at seminar/conference | Completion of probation review document / thesis; Masters module completion/ event/workshop/defence of methods to peers | RDS UEA |
| A4. Use appropriate methods, including operation of equipment and techniques of analysis, to advance knowledge in your field. | T: Research philosophy, models & design / data collection/ analysis ; Data management; Laboratory-specific techniques E: Practise relevant skills | Completion of probation document/thesis; show evidence of development of technical skills | RCUK RDS UEA |
| A5. Explain the reliability/reproducibility and robustness of your research and its susceptibility to bias. | T: Research philosophy, models & design; Critical Reviewing of Research Papers / Critical thinking; Cross-discipline working E: Defend the research to members of the public, at a conference or in written media | Discuss strengths and limitations of your research – in probation review document, thesis, conference presentations | RCUK |
| A6. Apply original, creative and independent thought processes to develop your research. | T: Critical thinking; E: Apply ideas from conferences, reading, methodological training, other sources | Thesis / communication showing evidence of original contribution; Research log | RDS UEA |

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|---|--|---|-------------|
| RDF Domain B: Develop and show the personal qualities and self- and career-management skills needed to be an effective researcher | | | |
| B1. Practise the time-management and organisational skills needed to deliver an extended, multi-faceted project according to agreed timelines alongside other activities in personal or professional life. | T: Project planning and time-management; E: Manage competing demands, eg. by doing representation work/ part-time work/ other responsibilities alongside the research | Complete stages of the research to time /deliver competing responsibilities | RDS UEA |
| B2. Develop relationships and networks within and outside academia to help sustain and stimulate your research and career. | T: Establishing /maintaining networks E: membership of professional societies; maintain contact with colleagues/ friends in related fields over an extended period | Membership of professional societies; representation activities; Informal interactions relating to/ supporting the work | RDS |
| B3. Develop ways to maintain enthusiasm for your work in the face of change and setbacks, and maintain a work-life balance and mental and physical health. | T: Well-being, resilience (*M) & assertiveness; sustainable work-life balance E: Achievement of non-work goals | Personal achievements other than work; A forward view of work over 5yrs | RDS UEA |
| B4. Explore ways in which to extend and apply your knowledge and skills in a variety of sectors. <i>[desirable but not essential for MD, PhD by publication, Masters by Research]</i> | T: Attend careers events/fairs; E: work experience in a related area; consultancy; teaching; outreach; entrepreneurship activities | Evidence of exploration of / application of knowledge and skills in other sectors | RCUK |
| RDF Domain C: Use knowledge of the expected standards, requirements and professionalism of your research discipline/s | | | |
| C1. Explain the legal, ethical and professional principles of 'good research conduct' in your field/s, and how your research has complied with these. [mandatory; by end of Yr1] | T: ethics in research, confidentiality, info security, data protection, copyright, Health & Safety (– all *M) ; GCP/ GLP/ working with animals –*M where applicable | Completion of training/ application of knowledge gained | RCUK UEA |
| C2. Show your appreciation of and respect for the contributions of others in your research environment. [mandatory; by end of Yr1] | T: Avoiding plagiarism and collusion (*M) E: cite colleagues in oral or written work | Full citation of a wide range of types of source in publication of work | RDS UEA |
| C3. Develop an awareness of potential funders of research in your area, and explain the processes of securing research funding. <i>[desirable not essential for MD, PhD by publication, Masters by Research]</i> | T: funding of research | Apply for funding (eg. conf attendance/ equipt/training) | RDS |

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| <i>RDF Domain D: Communication for engagement, influence and impact</i> | | | |
| D1. Write about your research appropriately for different audiences, eg. academic specialist, academic non-specialist, lay. | T: writing for publication; writing a thesis; science communication; write a lay summary E: write a lay summary / conference abstract | Thesis; published paper/ abstract; Lay summary communication; | RDS UEA |
| D2. Compare and contrast how you approach oral communication of research in different contexts, eg. in teaching vs. speaking at an academic conference or to members of the general public. | T: Oral presentations; teaching and assessment; science communication E: teaching undergraduates/school children; talk at conference/seminar | Evidence of awareness of audience-focus | RDS |
| D3. Describe to non-specialists how your research may impact society and environment at different levels, how it expands the knowledge base upon which society draws, and any potential for commercial development. | T: Engagement and impact; science communication; User-participation in research E: write information for consenting participants; contribute to policy | Patient information leaflet for recruitment; media communication | RCUK UEA |
| D4. Describe responses from member/s of the public or other disciplines to the research in which you are engaged. | T: Public engagement in research E: Elicit feedback in public engagement activities; cross-discipline working | Evidence of receptiveness at Forum events/ school visits/ work experience/ clinics | RCUK UEA |
| D5. Practise giving and receiving peer-review. | T: Critical review of research papers; well-being and resilience, assertiveness E: Raise/ respond to questions at conference or internal seminars, eg. Bite-size | Literature review in probation document; informal internal/research group peer review | UEA |
| D6. Describe your role/s in teams of various types, how these have evolved during the period of your degree course, and how you would like your role/s to evolve in the future. | T: teamwork; working with supervisors (*M); reflective practice; equality and diversity (*M) E: Sustained work with colleagues in a variety of teams | Write a job application or letter; research log | RDS UEA |