

**Research Student's Details**

 Full name, *in capital letters*

CHIARA DI DIO

Name of School/Department/Centre

Genetics and Genome Biology (University of Leicester)

Date of Training Needs Analysis

24/01/2019

At the start of their research degree, research students should undertake a training needs analysis and develop a training plan. Current skills levels should be assessed to indicate gaps – a current skill level of 4 indicates you are confident in that area; research students can indicate where their skills are better or worse. Development needs should then be rated by priority as low (not needed immediately), medium (needed this year), or high (needed in next few weeks/months).

**Domain A – Knowledge and Intellectual Abilities (Knowledge Base)**

Subject Knowledge	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Has, at least, core knowledge and basic understanding of key concepts, issues, and history of thought					✓	✓		
Knows of recent advances within own research area and in related areas					✓	✓		
Is working towards making an original contribution to knowledge			✓				✓	
Is developing a broader awareness of international and non-academic aspects of knowledge creation					✓	✓		

Research Methods – Theoretical Knowledge	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands relevant research methodologies and techniques and their appropriate application within own research area					✓	✓		
Justifies the principles and experimental techniques used in own research					✓	✓		

Research Methods – Practical Application	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Uses a range of research methods linked to study area; documents own activity				✓			✓	
Shows growing competence in own subject area and is developing awareness of alternative methods and analysis techniques					✓	✓		

Information Seeking	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Acquires and develops search and discovery skills and techniques					✓	✓		
Identifies and accesses appropriate bibliographical resources, archives, and other sources of relevant information					✓	✓		
Makes best use of a range of current tools and techniques					✓	✓		
Assesses the reliability, reputation, currency, authority, and relevance of sources					✓	✓		
Seeks feedback from relevant groups to access other insights					✓	✓		

Information Literacy and Management	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Designs and executes systems for the acquisition and collation of information using information technology appropriately				✓		✓		
Develops awareness of information/data security and longevity issues					✓		✓	
Knows where to obtain expert advice, such as information/data managers, archivists, and librarians				✓		✓		

Languages	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Has excellent knowledge of language(s) appropriate for research, including technical language				✓			✓	

Academic Literacy and Numeracy	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Ability to understand, interpret, create, and communicate appropriately within an academic context				✓			✓	
Prepares grammatically and syntactically correct content for presentations			✓				✓	
Writes in a style appropriate to purpose and context for specialist and non-specialist audiences				✓			✓	
Is mathematically competent to undertake research in own research area; understands and applies any statistics that may be used in own research area; analyses data and uses appropriate computer packages			✓					✓
Is IT literate and competent in using information and digital technology				✓			✓	

**Domain A – Knowledge and Intellectual Abilities (Cognitive Abilities)**

<b>Analysing</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Critically analyses and evaluates own findings and those of others					✓	✓		
Validates datasets of others				✓			✓	

<b>Synthesising</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Sees connections between own research and previous studies; benefits from guidance with synthesising information/data and ideas					✓	✓		

<b>Critical Thinking</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Able to understand argument (oral and textual) and articulate own assumptions; developing independent and critical thinking					✓	✓		
Has the ability to recognise and validate problems					✓	✓		
Recognises multiple ways of knowing and alternative paradigms					✓	✓		

<b>Evaluating</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Summarises, documents, reports, and reflects on progress					✓	✓		
Evaluates the impact and outcomes of own research activities					✓	✓		
Assesses the quality, integrity, and authenticity of primary and secondary research information/data					✓	✓		
Accepts and gives constructive criticism					✓	✓		

<b>Problem Solving</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Isolates basic themes of own research; formulates basic research questions and hypotheses					✓	✓		

**Domain A – Knowledge and Intellectual Abilities (Creativity)**

<b>Inquiring Mind</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Demonstrates a willingness and ability to learn and acquire knowledge					✓	✓		
Demonstrates flexibility and open-mindedness					✓	✓		
Develops a style of questioning and questioning technique					✓	✓		

<b>Intellectual Insight</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Absorbs and appropriates ideas; is intellectually astute					✓	✓		
Creates ideas and opportunities by investigating/seeking information					✓	✓		

<b>Innovation</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Understands the role of innovation and creativity in research					✓		✓	
May engage in inter-disciplinary research					✓		✓	

<b>Argument Construction</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Constructively defends research outcomes				✓			✓	
Provides some evidence in support of ideas					✓		✓	
Structures arguments clearly and concisely				✓			✓	

<b>Intellectual Risk</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Tests the boundaries, is willing to expose ideas to a critical audience, and to critically appraise other research					✓	✓		

**Domain B – Personal Effectiveness (Personal Qualities)**

<b>Enthusiasm</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Maintains enthusiasm and motivation for own research					✓	✓		
Recognises the need for passion and pride in own work					✓	✓		
Is highly motivated even when work is mundane					✓	✓		

<b>Perseverance</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Demonstrates self-discipline, motivation, and thoroughness					✓	✓		
Perseveres in the face of obstacles and set-backs but benefits from peer, supervisor, or leader support; is developing resilience					✓	✓		
Deals effectively with the routine aspects of research					✓	✓		

<b>Integrity</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Understands and demonstrates standards of good research practice in the institution and/or research area					✓	✓		
Seeks guidance as necessary					✓	✓		

<b>Self-Confidence</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Aware of some personal abilities and willing to demonstrate them			✓				✓	
Recognises boundaries of own knowledge, skills, and expertise and draws on and uses sources of support as appropriate			✓				✓	

<b>Self-Reflection</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Makes time to reflect on practice and experience					✓	✓		
Develops strengths and improves on weak areas					✓	✓		
Seeks personal feedback					✓	✓		
Learns from mistakes					✓	✓		

Responsibility	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Gradually takes complete responsibility for own project and own well-being; develops independence					✓	✓		

**Domain B – Personal Effectiveness (Self-Management)**

Preparation and Prioritisation	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Prepares and plans project to meet objectives and, with support, is able to adapt if necessary					✓	✓		

Commitment to Research	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Commits to and completes first project and establishes research credentials					✓	✓		

Time Management	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Manages own time effectively to complete research project; adheres to clear plan				✓		✓		

Responsiveness to Change	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Adapts approach when required to; seeks guidance and recognises risks					✓	✓		

Work-Life Balance	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Is developing an awareness of work-life balance issues					✓	✓		
Uses support and advisory resources when necessary to avoid undue pressure and to enhance personal well-being					✓	✓		
Considers the needs of others					✓	✓		

**Domain B – Personal Effectiveness (Professional and Career Development)**

<b>Career Management</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Takes ownership for and manages own career progression, sets realistic and achievable career goals, identifies and develops ways to improve employability				✓			✓	
Presents own skills, personal attributes, and experiences through effective CVs, applications, and interviews				✓			✓	
Begins to establish a career network					✓		✓	

<b>Continuing Professional Development</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Demonstrates self-awareness and the ability to identify own development needs					✓	✓		
Appreciates the need for and shows commitment to continuing professional development					✓	✓		
Recognises transferability of own experience and articulates this to potential employers or line managers					✓		✓	
Develops and maintains own records of achievement and experience					✓	✓		

<b>Responsiveness to Opportunities</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Demonstrates an insight into the transferable nature of research skills to other work environments and the range of career opportunities within and outside academia					✓	✓		
Understands and takes advantage of a broad range of employment and professional development opportunities within and outside academia, including work experience and internships					✓	✓		

<b>Networking</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Develops and maintains co-operative networks and working relationships with supervisors, colleagues, and peers within the institution and the wider research community					✓	✓		
Uses personal and/or online networks effectively for feedback, advice, critical appraisal of work, and responding to opportunities					✓	✓		
Engages with learned societies and public bodies					✓	✓		

Reputation and Esteem	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Speaks with authority on own topic			✓					✓
Begins to be known as a good researcher				✓			✓	

**Domain C – Research Governance and Organisation (Professional Conduct)**

Health and Safety	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands relevant health and safety issues and demonstrates responsible working practices					✓	✓		
Takes responsibility for own space; aware of impact on others and wider environment					✓	✓		

Ethics, Principles, and Sustainability	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands and applies the relevant codes of conduct and guidelines for the ethical conduct of research; seeks advice from supervisor					✓	✓		
Demonstrates awareness of issues relating to the rights of other researchers, of research subjects, and of others who may be affected by the research					✓	✓		
Is mindful of own impact on the environment; understands how to behave and work in a sustainable way					✓	✓		
Understands the concept of corporate social responsibility; seeks guidance as necessary					✓	✓		

Legal Requirements	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Has basic understanding of legal requirements surrounding research – e.g., Data Protection Act, Freedom of Information Act, Equality Act, and equivalent legislation in other parts of the UK			✓					✓

Intellectual Property Rights and Copyright	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Has basic understanding of data ownership rules as they apply to own research			✓					✓



<b>Respect and Confidentiality</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Within own research respects the right of participants to confidentiality and anonymity					✓	✓		
Respects colleagues					✓	✓		

<b>Attribution and Co-Authorship</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Understands concept of attribution and applies it consistently and fairly to appropriately recognise contributions and co-authorship; seeks advice on local codes of conduct					✓	✓		

<b>Appropriate Practice</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Understands and adheres to the rules and regulations concerning academic malpractice in the institution in which based and of professional body and funder if appropriate					✓	✓		

**Domain C – Research Governance and Organisation (Research Management)**

<b>Research Strategy</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Aware of how own research aligns with the research strategy of the institution and strategic focus of the research area					✓	✓		
Develops understanding of broader context of research					✓	✓		

<b>Project Planning and Delivery</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Applies effective project management through the setting of research goals, intermediate milestones, and prioritisation of activities					✓	✓		
Acts on decisions agreed with supervisor/line manager and delivers results					✓	✓		

Risk Management	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Makes basic risk assessment and is able to manage risks in own project with support			✓					✓
Aware of risks in virtual environments and when using interactive communication technologies			✓					✓

**Domain C – Research Governance and Organisation (Finance, Funding, and Resources)**

Income and Funding Generation	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands the processes for funding and evaluation of research			✓					✓
Writes own research proposal			✓					✓

Financial Management	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands the basic principles of financial management			✓					✓
Has some commercial awareness			✓					✓

Infrastructure and Resources	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Makes efficient use of available resources			✓					✓
Knows immediate academic system/work environment, departmental or faculty			✓					✓

**Domain D – Engagement, Influence, and Impact (Working With Others)**

Collegiality	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Shows consideration to others					✓	✓		
Listens, gives, and receives feedback and responds perceptively to others					✓	✓		

<b>Team Working</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Understand own behaviours and impact on others when working in and contributing to the success of formal and informal teams					✓	✓		
Appreciates contributions of other team members including non-academic members; thanks people for their contributions					✓	✓		

<b>People Management</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Negotiates activities and deadlines with supervisor/line manager					✓	✓		

<b>Supervision</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Engages in peer support and evaluation and undergraduate support and assessment					✓	✓		

<b>Mentoring</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Effectively supports the learning of others when involved in teaching, mentoring, demonstrating, or other research activities					✓	✓		
Recognises the importance of mentorship and receiving mentoring					✓	✓		

<b>Influence and Leadership</b>	<b>Current Skill Level</b>					<b>Priority</b>		
	1	2	3	4	5	Low	Med	High
Engages in debate and invites challenge				✓		✓	✓	
Develops awareness of need to gain support					✓	✓		
Recognises implications of own research for real life contexts					✓	✓		
Learns of the value to academia of engaging in dialogue with those who use the outputs of research to achieve influence and impact					✓	✓		

Collaboration	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Aware of the value of working collaboratively to benefit research and for maximising the potential for impact					✓	✓		
Co-produces research outputs with supervisors/research leaders					✓	✓		
Recognises common/conflicting interests within own and adjacent research areas					✓	✓		

Equality and Diversity	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Is sensitive to and respectful of individual differences; develops awareness of diversity and difference within working environment					✓	✓		
Understands equality and diversity requirements of institution					✓	✓		

**Domain D – Engagement, Influence, and Impact (Communication and Dissemination)**

Communication Methods	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Constructs coherent arguments and articulates ideas clearly to a range of audiences, formally and informally, through a variety of techniques					✓	✓		
Actively engages in knowledge exchange and debate with colleagues, sometimes between research areas					✓	✓		
Appreciates the skills of rhetoric			✓					✓

Communication Media	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Develops skills in a range of communication means – such as face-to-face interaction, using interactive technologies, and/or textual and visual media					✓	✓		
Has a web presence as a researcher					✓	✓		
Uses audio-visual aids effectively in presentations				✓				✓

Publication	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands the processes of publication and academic exploitation of research results			✓					✓
Produces some publishable material in print, electronic, or other format			✓					✓
Is developing awareness of the range and diversity of outlets for publications			✓					✓

**Domain D – Engagement, Influence, and Impact (Engagement and Impact)**

Teaching	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Contributes to teaching at undergraduate level					✓	✓		
Assists in the supervision of undergraduate projects					✓	✓		
Participates in research meetings (seminars, workshops, conferences, etc.); has a developing awareness of the ways research influences/interacts with teaching					✓	✓		

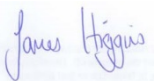
Public Engagement	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands and appreciates the value of engaging with the public; willingly participates					✓	✓		
Open to influence of public interactions on own work					✓	✓		
Responds to local opportunities and existing activities; presents aspects of research at public events					✓	✓		

Enterprise	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Creates ideas and identifies opportunities internally and externally			✓					✓
Develops ideas in an innovative manner within own institution or externally			✓					✓
Understands the process of commercial exploitation of research results			✓					✓
Learns of the value to academia of establishing relationships in business/commercial contexts			✓					✓

Policy	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Understands the relevant policy-making processes and presents findings in a policy-friendly format		✓						✓
Analyses policies and understands the wider contexts in which they are situated		✓						✓

Society and Culture	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Develops awareness of the impact of research on wider society and the impact of society, the environment, and culture of research					✓	✓		
Understands concept of corporate social responsibility					✓	✓		

Global Citizenship	Current Skill Level					Priority		
	1	2	3	4	5	Low	Med	High
Shows a broad understanding of the context in which own research takes place, at the national and international level					✓	✓		

Signature (MEICOM ESR)	Chiara Di Dio	Date	25/01/2019
Signature (Supervisor)		Date	25/01/2019
Signature (Second Supervisor)		Date	