Research Projects

Dr Garry McDowell, PhD, FRCPath, FESC Reader in Clinical Science Manchester Metropolitan University The Research Projects: New Structure For various reasons, in consultation with NSHCS and the HEIs, the focus of the research part of DCLinSci has been changed

At MMU, you still complete C1 and C2, although there is less of a divide between them.

Depends on Life Science and Physiological Science disciplines and whether a student is completing the full DCLinSci

If you are completing the full DClinsci

Research Projects - When to Start

Year 3: Formal start and registration on research section of programme (C1).

Year 4 & S: Continue to work on research project.

Year 5: Submit research project thesis

2 Units: C1 and C2

C1: Doctoral Research and Innovation in Clinical Science (year 3)

If completing full DClinSci, this unit will focus on the topic you have chosen for your research project.

In this instance C1 and C2 will be continuous, although you must pass the C1 assessment to continue for C2

Summary of Learning Outcomes

1. Identify an issue and justify suitability for inquiry project 2. Critically analyse problem 3. Appraise various methods of addressing problem and determine best way forward 4. Design, present and defend comprehensive and viable proposal What is Required Literature Review (4000 words) Critical analysis of your topic and why it is important Proposal Description of idea and why important Stakeholder involvement Business case/costing Executive and Lay summary 30 minutes, 20 mins Presentation presentation + 10 minutes

Literature Review

4000 words +/- 10% Critical analysis of the background to your project Difficult to be specific as each will be different Think about how you present information Research Proposal 5 pages of A4

Aims and purpose of proposed investigation Background (brief) of project Plan of investigation and methodology Potential risks and challenges Timescale Expected value and impact

Costs

Staffing Material and consumables Equipment costs (if required) Publication costs Travel costs Other expenses (if applicable)

Stakeholder Engagement

Think about who your stakeholders are Remember the patient Think about how you will gather their opinions Think about how you should record evidence of stakeholder involvement Executive and Lay Summary Executive Summary: What are the key messages you want a funding panel to consider. Convince them. Write for a professional, but may not be entirely specialist reader

Lay Summary: Very important for dissemination. These are often published on grant awarding bodies website to show what projects have been funded.

Research Unit (C2)

'The purpose of this unit is to support students in undertaking their research project.'

To successfully complete this unit, students must:

Conceive a research project, plan and conduct a series of experiments and report and defend these in a thesis and viva-voce examination

Doctoral Criteria

Doctoral degrees are awarded to students who have demonstrated:

- the creation and interpretation of new knowledge, through original research or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline, and merit publication
- a systematic acquisition and understanding of a substantial body
 of knowledge that is at the forefront of an academic discipline or
 area of professional practice
- the general ability to conceptualise, design and implement a project for the generation of new knowledge, applications or understanding at the forefront of the discipline, and to adjust the project design in the light of unforeseen problems
- a detailed understanding of applicable techniques for research and advanced academic enquiry.

Professional Doctorate

The research may be embedded in professional practice, driven by a problem identified from a 'real world' context, making a creative and critical intervention in that context, and leading to a practical outcome as well as a theoretically informed written thesis. Learning Outcomes Conceptualise, design and implement a project for the generation of new knowledge, applications or understandings at the forefront of clinical science and adjust the project design accordingly in the light of unforeseen problems. Gain ethical, legal and regulatory

approval as appropriate to the project and scientific discipline.

Defend the work included in the thesis.

The Process Research project is undertaken over 3 years and completed in year 5.

Thesis is examined before viva

In line with other Doctoral projects feedback will not be provided by the examiners before the viva How will you be assessed?

Thesis: A thesis of 30000 - 40000 words is submitted

Thesis is examined by internal and external examiner

Viva-voce: With internal and external examiner

The Thesis

No strict guidelines on structure See <u>Research Student Handbook</u> Various formats and styles Work with academic and workplace supervisor to agree best approach.

Common Thesis Formals

Journal Format	Traditional Format
Abstract	Abstract
Systematic Review/ Literature Review	Introduction/Literature Review
Empirical Paper(s)	Methods
Discussion/Review	Results Chapter(s)
References	Discussion and Conclusion
Appendicies	References and Appendicies

Innovation

Your final thesis must contain a chapter on the innovation aspects of your research.

This should focus on the the introduction of your research project into clinical practice. What if you are not completing the full DCLinsci? For students not completing the full DCLinSci

You still have to complete C1

In this instance, you should focus your submissions on an innovation topic, as required by NSHCS

Please see Innovation Project Brief for further advice and guidance.

Good Luck