

# HSST Physical Sciences

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# Physical Sciences HSST Programme

	Semester 1		Physical Sciences (Clinical Biomedical Engineering, Medical Physics)				Semester 2	
Year 1	A1 Semester: 1 30 credits	B1 CBE Sem: 1 10 C DL	B2 CBE Sem: 1 10 C DL	A2 Semester: 2 20 credits	B2 MP/ B3 CBE Sem: 2 10 C	B1 MP Sem: 2 10 C	B3 MP Sem: 2 10 C	
Year 2	A3 Semester: 1 30 credits	B6 and B8 MP/ B4 CBE Sem: both 20 credits		A4 Semester: 2 20 credits	A5 Semester: 2 20 credits	B5 Semester: 2 20 credits	B6 CBE Sem:2 20 C	Submit Research Project Form
							B4 MP Sem: 2 10 C	
Year 3	C – Research Project	Year 3 workshop – September • How to give a lay talk • Lit review vs systematic review		B9 MP Semester: 1 20 credits	Submit Literature Review	B7 Semester: 2 20 credits	B8 (CBE) Sem: 2 10 C DL	Give Lay Talk
Year 4	C – Research Project	B9 CBE Semester: ? 10 credits DL	B10 CBE Sem: ? 20 C		Year 4 workshop - January • How to write a thesis • How to write a paper • How to give a professional talk	B10 MP Semester: both 30 credits		
Year 5	C – Research Project						Submit Thesis	Viva voce examination

# HSST

- Late start
- Modules running late
- Liverpool to Manchester
- Thank you for your patience
- Communication /Feedback



# HSST

- A modules Management & Leadership (L7)
- B modules; technical modules (L8 inc MPE)
- C modules: research and innovation (L8)

# What is Doctoral level Study?

- New knowledge that contributes to the understanding of the subject
- Original independent research
- Critical evaluation
- Ability to put own research in the context of what has gone before and show how your knowledge contributes to it



# Doctorate in Clinical Sciences (D.Clin.Sci.)

## *What is a Professional Doctorate?*

A Research Degree meeting Quality Assurance Agency (QAA) **Level 8** criteria and FQ-EHEA for Doctoral Degrees

- 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 which is at the forefront of an academic discipline or area of professional practice
- A detailed understanding of applicable techniques for research and advanced academic enquiry



# C1

- Submit project description, evaluated, if required modifications made
- Report
  - Lit survey (~4000 words)
  - 5 A4 pages Innovation Proposal
    - Exec summary
    - Idea and why it is innovative
    - Barriers to implementation
    - Impact of innovation
    - Business case



# C1

- Lay Presentation
- Panel
  - Lay representative
  - Programme Directors, School Representative
- Attending
  - Supervisors
  - Trainees





# The Research Project

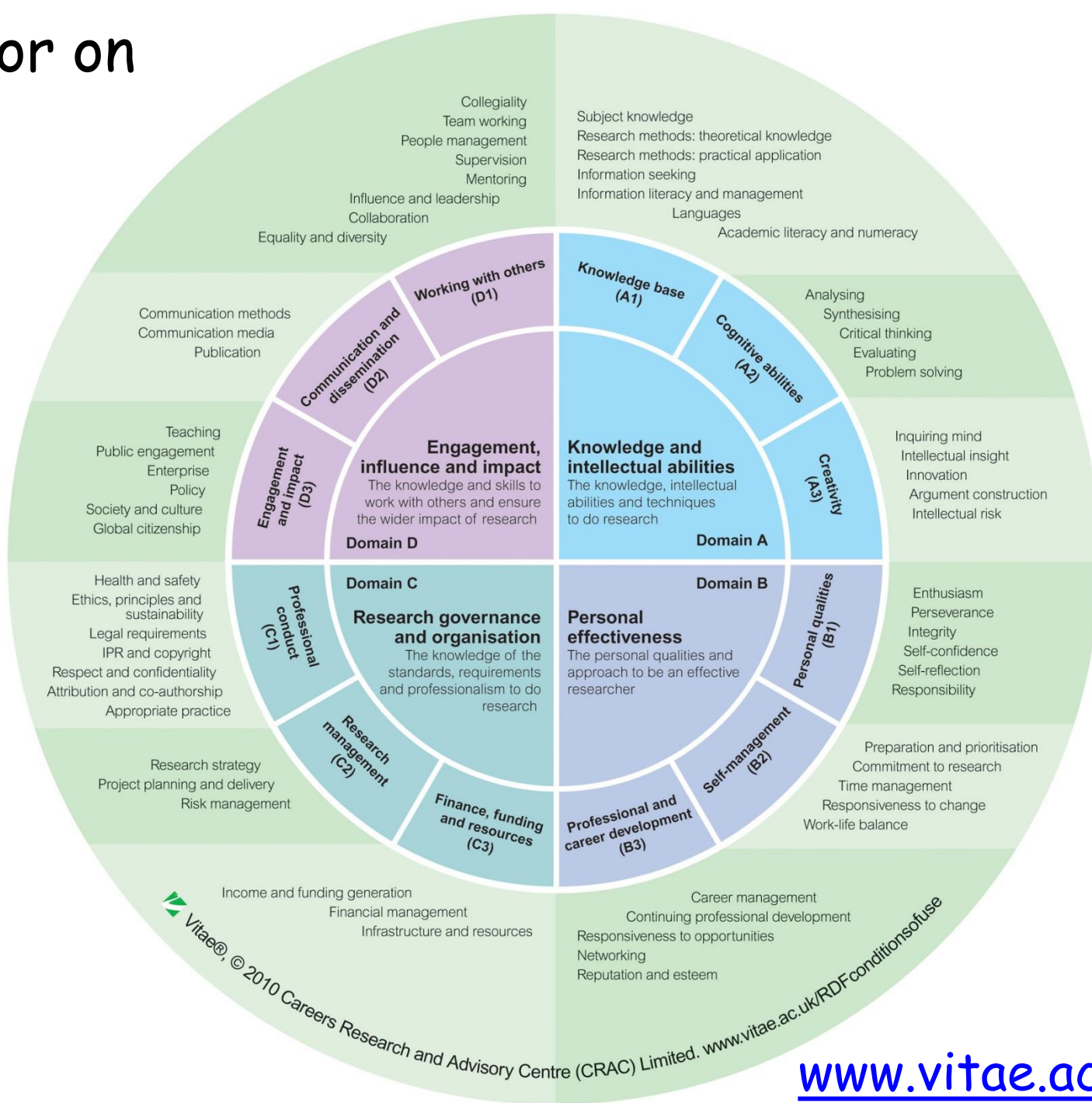
- C is the major research component of the DClinSci.
- Project plan submitted, if required modifications suggested and then agreed
- Examined by Thesis & *viva voce* (with external examiner)

# Progress

- Monitored by eProg
- Follows researcher development programme



# Monitor on eProg



# Dissertation



I CAN'T  
KEEP CALM  
I'M WRITING MY  
DISSERTATION

# What will the dissertation look like?

One of two possible formats may be used:

Format 1 – The Standard Thesis

<http://documents.manchester.ac.uk/display.aspx?DocID=7420>

Format 2 – Journal Format

<http://www.staffnet.manchester.ac.uk/services/rbess/graduate/code/submissionandexamination/>

Electronic submission of PDF via eThesis submission portal required for both formats

<http://www.library.manchester.ac.uk/using-the-library/staff/research/services/ethesis/>

**+ 2 paper copy prints of the PDF submission**



# Standard Dissertation

Normally expected length 20-40,000 words (must not exceed 50,000)  
(A PhD dissertation would be 80,000 words maximum length)

## Structure:

- Electronically generated cover page
- Title page + Submission statement
- List of contents, tables, figures etc.
- Abstract + (optional) Lay abstract
- Declaration/copyright statement/Acknowledgements
- **Brief statement for Examiners\***
- Chapters;
  - Introduction/Literature review
  - Aims & Objectives
  - Methodology
  - Results chapters (1 or more)
  - Discussion/conclusion & future work
  - Innovation
  - References
  - Appendices – to include details of rest of course

Published papers arising from the thesis may be included in the Appendices

# Journal Format Dissertation

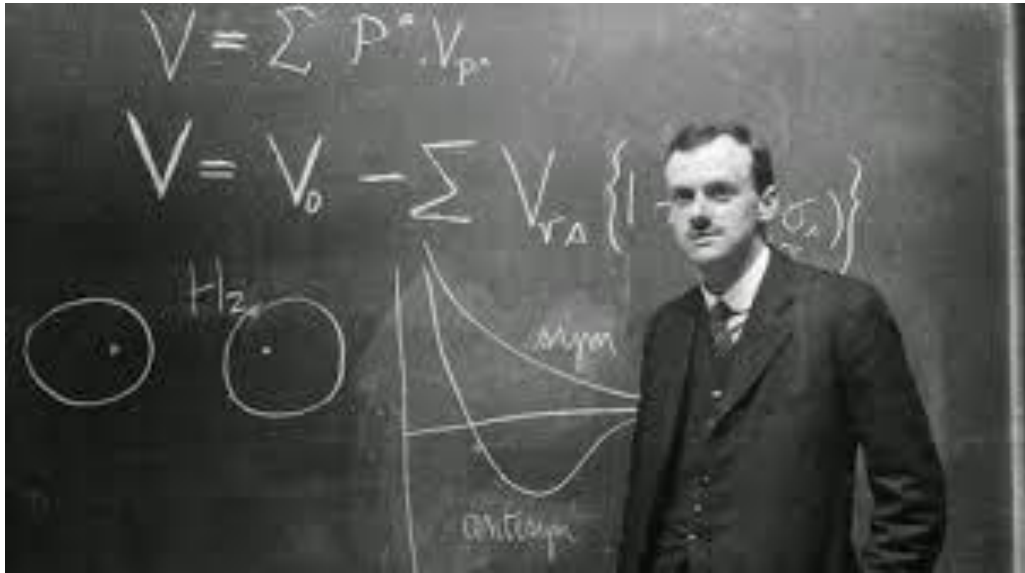
Expected length 20-40,000 words

(A PhD journal format thesis would be 90,000 words maximum length)

Structure:

- Electronically generated cover page
- Title page + Submission statement
- List of contents, tables, figures etc.
- Abstract + (optional) Lay abstract
- Declaration/copyright statement/Acknowledgements
- **Brief statement for Examiners\***
- Rationale for submitting in journal format & description of dissertation structure
- Literature Review
- Presentation of results and their analysis in a format suitable for publication in a peer-reviewed journal – Empirical papers
- Innovation
- Critical Appraisal Paper drawing together the various outcomes of the work in a coherent whole and indicating future directions for the work
  - References
  - Appendices

# Length of Dissertation



- Dirac
- V short
- Groundbreaking
- Nobel Prize
- Flexibility



## Standard or Journal Format?

*Journal format is not suitable for everyone*

Things to consider:

1. Does the data lend itself to more than one paper? How many? Not proscribed...
2. Conflict between producing multiple papers to fit Journal format or producing one much higher impact paper
3. Journal format theoretically makes it easier to get data to publication
4. May include published papers, draft papers, work in progress – but must only include research conducted during the DCLinSci and must tell a coherent “story”
5. It is expected that the student had the major role in any joint-authored paper included and that they have written the paper

Student and supervisors need to discuss this as early in the project as possible and revisit several times – don't leave the decision too late!

## DClinSci - Statement for Examiners\*

We recommend inclusion of a statement within the thesis to show the context of the research project within the wider content of the whole DClinSci.

i.e. show the nature of the taught component

Leadership & Management

Section B

Innovation project & any engagement with public

## Examination process

Thesis must be submitted by the end of year 5

Notice of submission must be given 6 months – 6 weeks before this date

Notice of submission triggers nomination of examiners

Internal and External Examiners must be nominated

Criteria for Examiners

<http://documents.manchester.ac.uk/display.aspx?DocID=7444>

The external examiner must:

- i. have expertise in the area of work to be examined;
- ii. be experienced in research, and have recently published, or have equivalent professional experience;
- iii. normally have been an examiner for a postgraduate research degree or have had experience of the postgraduate research degree examination process - external examiners examining for the first time should have experience of supervising a research student and examining as an internal examiner;
- iv. hold a postgraduate research degree at the level he/she is examining, or have equivalent professional experience;
- v. hold/have held an appointment within the university system, although it is permissible to appoint an appropriate person from outside the university sector; e.g., a senior industrial scientist or professional practitioner who is aware of the standards required.

Acceptable to discuss nomination with the student

You **MUST** discuss the nomination with the Programme Director for your specialty

## Outcomes and resubmission process

*Note: Students must have successfully completed the “taught” component of the Doctorate before being examined for the research component.*

After submission the thesis is sent out to internal and external examiners who read it and make an *independent preliminary* report. These are exchanged prior to viva.

Viva must be arranged within 12 weeks of examiners receiving thesis (ideally earlier than this)

Supervisors may attend the viva (*if student agrees*) but may not participate in any way.

## Outcomes and resubmission process

Following Viva the following outcomes are possible:

Award (with no corrections) (Ai)

Award (with minor corrections) (Aii)

Refer for re-examination under one of the following categories:

Bi – satisfactory in substance but presentation/some content defective **no oral Re-examination needed.**

Bii - satisfactory in substance but presentation/some content defective **oral Re-examination required.**

Biii – Unsatisfactory in substance, defective in presentation/content, requires further research and a further oral examination

C – Fail

# Thank You for listening

- Questions

