

HSST Physical Sciences  
Medical Physics  
Clinical Biomedical Engineering

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# Programme Timetable

	Semester 1			<i>Physical Sciences (Clinical Biomedical Engineering, Medical Physics)</i>				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

- 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

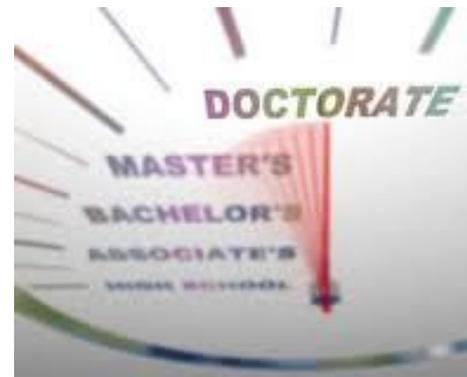


# Doctorate in Clinical Sciences (D.Clin.Sci.)

## *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



# Lay Presentation

- Hard, but rewarding
- And it really shows you understand the subject
- Tell a story
- Real world analogies
- Avoid use of jargon
- Try it out on a practice lay audience
- Be ready for questions (and don't drop back in to jargon!!)



# Lay presentation

## Literature Review / Innovation Proposal

- Lay Presentation  
(15 min)
- Panel
  - Lay representatives
  - Programme Directors
  - External Examiner
- Attending
  - Supervisors
  - Trainees



# The Substantial Research Project (C)

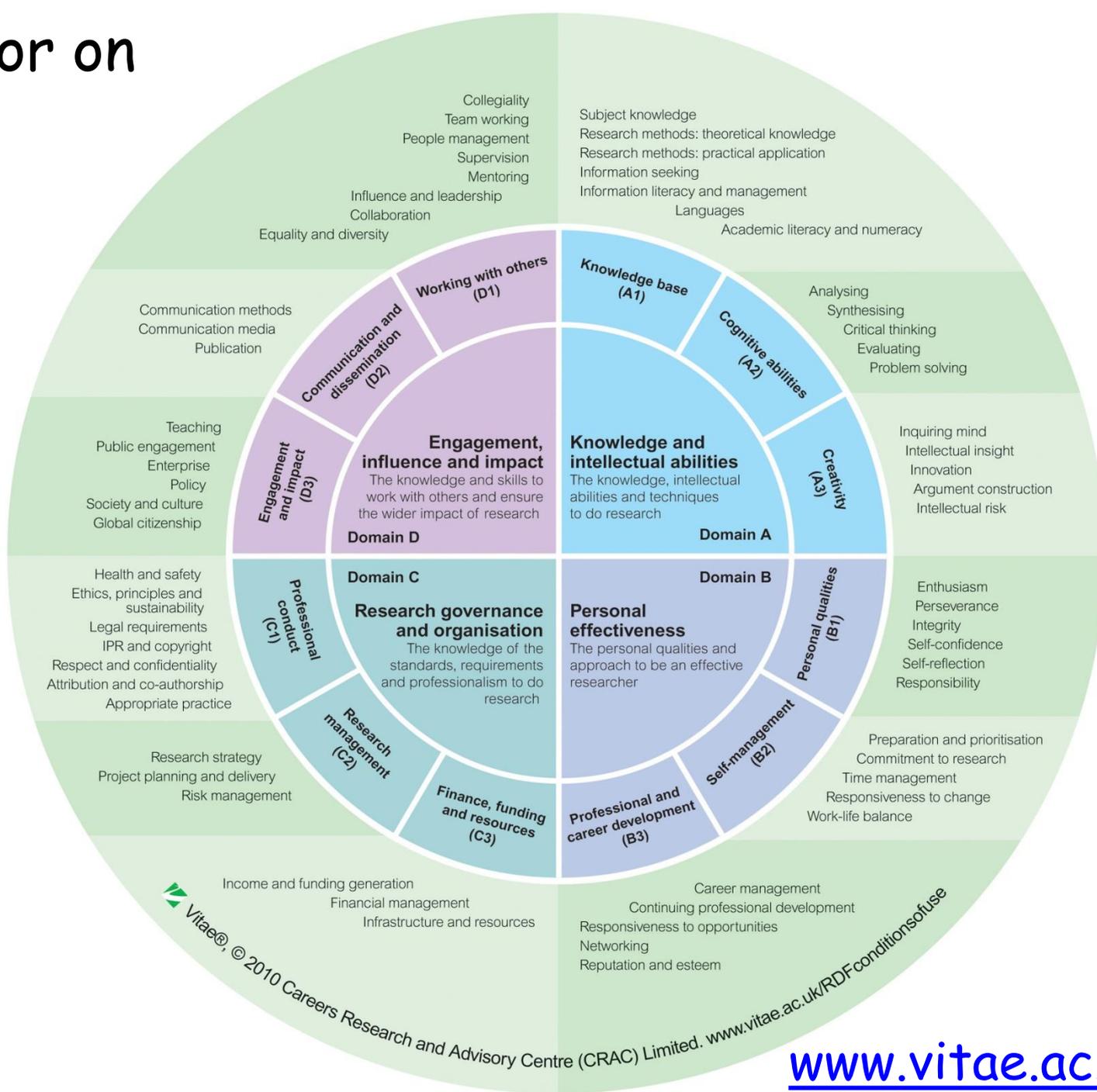
- C is the major research component of the DClinSci.
- C may be (but does not have to be) based on implementation of C1 (innovation project)
- C project plan submitted, if required modifications suggested and then agreed
- Examined by Thesis & *viva voce* (with external examiner)

# Progress

- Monitored by eProg
- Follows researcher development programme



# Monitor on eProg



# Research Project C Dissertation

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

# Dissertation

- Traditional dissertation
- By publication: 2 or 3 key publications linked together to form a cohesive document

# What will the dissertation look like?

One of two possible formats may be used:

Format 1 – The Standard dissertation

<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

Expected length 20-40,000 words

(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
  - Innovation
  - Conclusion
  - Future work
  - References
  - Appendices

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

# Journal Format Dissertation

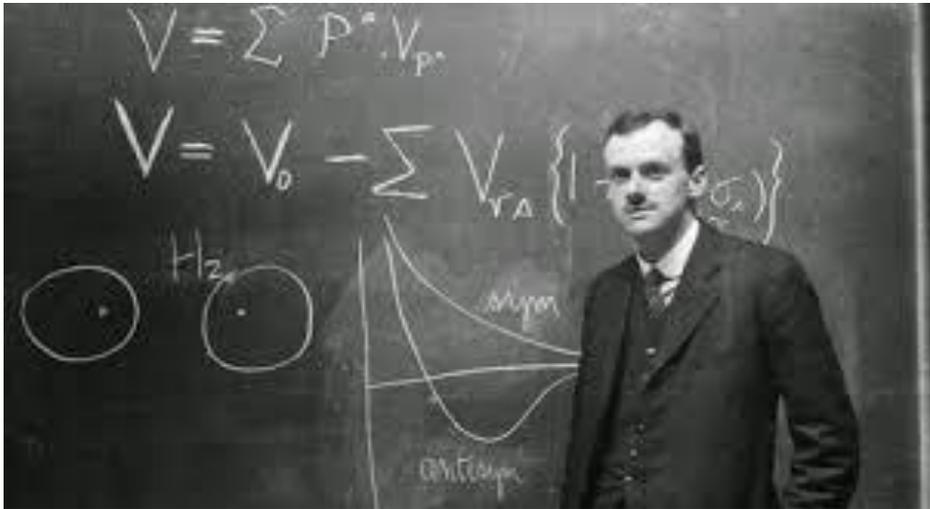
Expected length 20-40,000 words

(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
- Chapters;
  - Introduction/*Literature review*
  - Aims & Objectives
  - Methodology*
  - Results chapters* Can form publications
  - Discussion*
  - Innovation
  - Conclusion
  - Future work
  - References
  - Appendices

# Length of Dissertation



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

# Standard or Journal Format?

Things to consider:

1. Does the data lend itself to more than one paper? How many? Normally 2-3
2. Journal format means that you work on dissertation as you progress,
3. And publications have been peer reviewed
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 trainee had the major role in any joint-authored paper included and that they have written the paper

Trainees 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 dissertation 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>

# Examiners

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

