Projects and Writing them up

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Outline

The research projects

Write ups

DPhil research proposals

Project Viva

Projects

Project 1: Monday 21st April– Friday 11th July

Project 2: Monday 14th July – Friday 3rd October

- 11 weeks of work in the 12 week period

- Supervisors must ensure a suitable mentor is available to meet with the student **at least once a week** during the project period.

- Supervisors can claim legitimate research costs of up to £500 associated with each project.
  - Please ensure invoices are sent to the DTC Financial Administrator, Johanna Burch (johanna.burch@dtc.ox.ac.uk)

Project write ups

- Students are required to produce a dissertation for each project
- Written in the style of a research paper
- Word limit **5,000**

- Filename **yournameProject***
- Single Word or pdf file
- **Deadlines**
  - **dependent on holidays (July 4th , July 11th or July 18th)**
  - **and 3rd Oct**
- **Submit to dtcprojects@dtc.ox.ac.uk**

- Project supervisors are expected to read and comment on a draft of the project dissertation, prior to submission.

- Your projects will be marked by your supervisor and an independent examiner.

Write up style

IN ENGLISH

In the style of a research paper

Chat with your supervisor as to an appropriate choice

Create your reference list early

Endnote, Bibtex

Concise

Include only details that are important to the main thrust of the project

Abbreviations

Keep to a minimum and define them upon first use in the text. Non-standard abbreviations should not be used unless they appear at least three times in the text.

Plagiarism

If you use a result, observation or generalisation that is not your own, reference it.

The only exceptions are cases where every researcher in the field already knows it: dynamics equations need not be followed by a citation of Newton,

Good referencing tells the reader which parts of the thesis are descriptions of previous knowledge and which parts are your additions to that knowledge.

If you are writing in the passive voice, you must be more careful about attribution than if you are writing in the active voice:

"The sample was prepared by heating yttrium..." does not make it clear whether you did this or whether Acme Yttrium did it. "I prepared the sample..." is clear.

Cover page

Title

Comprehensible to readers outside your field

Avoid specialist abbreviations

Remove waste words, *study, investigation*

Be truthful (don't promise what your project does not deliver)

Name

Supervisor Name(s)

Department

Date

Abstract

Concise and factual

- Less than 300 words
- Briefly state the purpose of the research, the principal results and the major conclusions
- Should not contain references
- Self contained

Can help to consider sub-sections

- Motivation
  - Specifically state the scientific question within the context of the field of study
- Methodology/Principal Findings
- Conclusions/Significance
  - Summarize the scientific advance and its impact on biology

Introduction and Literature Review

Imagine a non-specialist reader

Put the focus of the manuscript into a broader context

A thorough review of key literature

- If there are relevant controversies or disagreements in the field, they should be mentioned
- Include references to primary texts, as well as review articles

Conclude with

- Brief summary of your major results
- Brief statement of the overall aim of the work and its importance within the field

Introduction and Literature Review

From where did the problem come?

What is already known about this problem?

What other methods have been tried to solve it?

Why is it important?

Introductions comprising primarily of information taken from text books are inadequate for the purposes of your project.

The body of the dissertation

Divided into sections as described by the journal

> Remember you are describing 10 week project so the balance of the sections may be quite different from a real research article

Give a clear description of your research work

> design of any experiments
>
> methods, theory, data collection
>
> analysis of results (where appropriate)
>
> Any raw data or computer programs that are included in the thesis should be placed in appendices/supplementary material (online)

Methods

Provide enough detail for reproduction of the findings

> **Write with a student trying to follow on from your work in mind**

Protocols for new methods should be included

Well-established protocols can be referenced

Results

Details of all of the experiments that are required to support the conclusions of the paper

Results are normally written in the past tense

Tables

Cite tables sequentially in the text

Keep titles concise

Footnotes can be used to explain abbreviations

Tables occupying more than one printed page should be avoided

   Larger tables can be put in supplementary material (online)

Figures

Check that your figures print correctly

    it should not look fuzzy, jagged, pixellated or grainy at the intended print size

Cite figures sequentially in the text

Concise title

Legend should be succinct, while explaining all symbols and abbreviations

    Avoid lengthy descriptions of methods

    Aim of the legend should be to describe the key messages of the figure

It should be possible for a reader to understand the figure using only the figure legend

Graphs

Unless the ranges of your data make it impractical, show the origin and intercepts

Show error bars on data, unless the errors are very small

Use appropriate statistical analyses / tests

Discussion

Spell out the major conclusions of your work

    Along with explanation or speculation on the significance of your conclusions.

    How do the conclusions affect the existing assumptions and models in the field?

    How can future research build on these observations?

    What are the key experiments that must be done?

Strengths and weaknesses

Suggestions should be given on how the project might be extended if further time and resources were available

References

Check that the referencing software has worked properly

Follow a single style as specified by the journal

Make sure you refer to the correct reference

References don't count towards the word limit

Assessment

Marked by the project supervisor and an appropriate specialist

Supervisor's report

Project supervisors provide a report on the student's overall performance

Overall grade takes this into account

Available to the other marker

Provides background that may not be obvious from the dissertation itself

- how much input the student had into the project design
- degree of work involved in data collection
- any serious problems with the project beyond the student's control

Choosing your DPhil

- All the same questions as when choosing your project
- In conjunction with your supervisors submit
  - Named Supervisor(s)
  - Department
  - Title
  - Outline

- Date for decision: 3rd September

Choosing your DPhil

- In conjunction with your supervisors submit
  - Named Supervisor(s)
  - Department
  - Title
  - Outline

- Date for decision: 4th September

Any questions?

Process so far

- Choose two projects
- Do them
- Choose a DPhil
- Start DPhil
- **DTC viva** (about 4-6 weeks after the start of the DPhil)
  - Required to produce a **research proposal**

Research Proposals

- With your DPhil supervisor, you will produce a research proposal describing the work you intend to do

- The proposal will be reviewed by your DTC viva committee and will inform their questions at the viva.

- You will receive verbal and written feedback on the proposal, and you may be asked to submit a revised version by the beginning of Hilary term.

- This process is intended to help you to define your research goals clearly at the outset of your project, ensuring that you are able to make progress immediately.

Research Proposals

6 pages in total

Submit ~1 week before your viva

Proposal should contain:

1 paragraph summary for a non-specialist audience (EPSRC use)

Background: 3 pages

- description of the research problem
- argument as to why that problem is important
- review of relevant literature

Description: 2 pages

- Full description of the proposed research methodology, from hypothesis to experimental plan and design can also contain some preliminary results

Planned timeline: 1 page

- clear picture of planned goals timings for the completion of significant portions of the work

Project Viva

Attendees: YOU, a DTC director, a subject area expert

The focus of the viva will be your future DPhil plans
Your DTC viva committee will have:
>   marks from your DTC courses
>   copies of your short project write-ups
>   the examiner's and supervisor's reports on those projects
>   your DPhil research proposal.

The viva will begin with a presentation and last approximately 30 minutes

Questions from the panel concerning
>   the work you have undertaken
>   the research you propose to undertake for your DPhil
>   general questions pertaining to your first year within the DTC

The Process

Choose two projects

- **Do them**
- Write them up

Choose a DPhil

- Start DPhil

Write a research proposal

- hand in ~1 week before viva

DTC viva

- about 4-6 weeks after the start of the DPhil

Questions?