



**UCD College of Social Sciences and Law**  
School of Information and Communication Studies

**This should be the title of your thesis**

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This thesis is submitted to the University College Dublin in fulfilment of the requirements  
for the degree of Doctor of Philosophy in Social Sciences and Law

November 11, 2023

## Thesis Structure

This thesis is based on the structure outlined by the University College Dublin's requirements for the School of Information and Communication Studies. The document includes:

1. **Frontmatter:**
  - Cover Page
  - Credits
  - Authorship Declaration
  - Datasets (if applicable)
  - Acknowledgements
  - Publications
  - Abstract
  - Glossary
2. **Lists:**
  - List of Figures
  - List of Tables
  - List of Source Codes
  - Table of Contents
3. **Demo thesis chapters (2)**
4. **Backmatter:**
  - Bibliography
  - Appendices

## Template Information:

Template Version 1.0 | November 11, 2023

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Template created and updated by **Giulia Osti** (a.k.a. Semantic Noodles).

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## **Declaration of Original Authorship**

This thesis is submitted to University College Dublin in fulfilment of the requirements for the degree of Doctor of Philosophy. I hereby certify that the submitted work is my own work, that it was completed while registered as a candidate for the degree stated on the title page, and that I have not obtained a degree elsewhere on the basis of the research presented in this submitted work.

*Dublin, November 11, 2023*

.....

Signature

## Datasets

This section provides information about the datasets used in the thesis.

<b>Dataset</b>	<b>Description</b>
Dataset 1	Describe Dataset 1 here, including its source, purpose, and any relevant details.
Dataset 2	Describe Dataset 2 here, including its source, purpose, and any relevant details.
Dataset 3	Describe Dataset 3 here, including its source, purpose, and any relevant details.

## Acknowledgements

Words cannot express my gratitude to my professor and chair of my committee for her invaluable patience and feedback. I also could not have undertaken this journey without my defense committee, who generously provided knowledge and expertise. Additionally, this endeavor would not have been possible without the generous support from the MacArthur Foundation, who financed my research.

I am also grateful to my classmates and cohort members, especially my office mates, for their editing help, late-night feedback sessions, and moral support. Thanks should also go to the librarians, research assistants, and study participants from the university, who impacted and inspired me.

Lastly, I would be remiss in not mentioning my family, especially my parents, spouse, and children. Their belief in me has kept my spirits and motivation high during this process. I would also like to thank my cat for all the entertainment and emotional support.

Source: <https://www.scribbr.com/dissertation/acknowledgements/>

## **Publications**

You can add here a list of the publications related to your thesis—even if you decided to submit a proper monograph. There are several ways to do that; nevertheless, the easiest is just to get them formatted following APA 7th (or 6th) and add them as text.

1. Author, A. (Year). Title of Publication 1. *Journal Name*, Volume(Issue), Page Range.
2. Author, A., Author, B., & Author, C. (Year). Title of Publication 2. *Journal Name*, Volume(Issue), Page Range.
3. Author, A., Author, D., & Author, E. (Year). Title of Publication 3. *Journal Name*, Volume(Issue), Page Range.

## **Abstract**

We present a novel approach for the automatic diagnosis of multiple sclerosis (MS), a condition causing lifelong blindness in young adults. Traditional approaches focus on identifying targets of disease and target-based methods use an expert-provided tool to model MS-like behaviors, which lacks understanding of the underlying neural network structure in the target-based model. We develop two new approaches using the same tool, which are both used to classify multiple sclerosis in an unsupervised manner: (1) we use a simple, yet effective deep learning approach that takes a full visual view of the individual, and (2) one of our two approaches, via the multi-classifier, utilizes the same tools to classify multiple sclerosis in a unified framework. Compared to existing knowledge bases on MS targets, we show that our approaches are able to accurately identify MS-like behaviors in the visual domain, and outperform the state-of-the-art approaches on both quantitative and visual measures.

Source: [BoredHumans.com](https://www.boredhumans.com)

# Glossary

**Algorithm** A step-by-step procedure or formula for solving a problem or accomplishing some end, especially by a computer..



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# 1

## Getting Started

### 1.1 General considerations

In this section, I am going to introduce you to the structure of the document I have designed. Depending on your expertise, you might want to decide to remove, modify, rearrange or remix parts of it – see for instance the details of the CC license mentioned on page ii. Be my guest! The design of the various elements follows the guidelines provided by the UCD, which has some specific requirements in terms of formatting (e.g. margins). Before I give you a wrap-up of the formatting parameters of the document I would like to write here a couple of useful links:

- Check regularly the portal about [Thesis Regulation & Submission](#) to be 100% sure that the guidelines are still actual.
- if you wish to change the logo in the cover or use the official colors of the UCD brand identity you can find guidance (and the PDF version of the brand manual) at this link.

Also, remember to always check with your supervisor(s) before you embark on a massive formatting journey: they might ask you to pick a specific software to work with, according to their experience and, most of all, their time

availability – Overleaf might or might not be the best choice for you. Therefore, I am working on the creation of a complementary template, this time using Microsoft Word (yikes!).

As you might know, I am a code-first person, but I do totally understand if you do prefer to deal with fully-interfaced software. Last, UCD provides us full access to the Office 365 suite, so it may be sort of unwise not to exploit it.

## 1.2 A quick recap

This section provides a wrap-up of the elements you should or may want to include in your thesis (in table 1.1), other than a rapid walk-through of the various parts included in this document.

### 1.2.1 Cover Page

- Modify `00-cover/cover-sample.tex` to include your actual cover information.

### 1.2.2 Declaration + Credits

- Fill in the content in `decl_credit.tex` with your declaration and credits.

### 1.2.3 Authorship Declaration

- Edit the content in `03-frontmatter/authorship-declaration.tex` with your authorship declaration.

### 1.2.4 Datasets (if applicable)

- If you made use of datasets update `03-frontmatter/datasets.tex`. Else, just remove the link.

Section	Mandatory	Options
Cover Page	✓	Logo variations.
Originality statement	✓	
Authorship declaration	✓	Depending on the format of the thesis (monography or list of articles – appendix B has a form you could use).
Datasets (if applicable)		
Acknowledgements		
Publications		
Abstract	✓	
Glossary		Can be converted into a list of acronyms – or be blended.
Lists of Figures and Tables	✓	
Main Chapters	✓	
Bibliography	✓	
Appendices		Support embedding different file types.

**Table 1.1:** *Thesis Structure Elements*

## 1.2.5 Acknowledgements

- Add your acknowledgments in `03-frontmatter/acknowledgements.tex`.

## 1.2.6 Publications

- If there are some publications related to your thesis list them in `03-frontmatter/publications.tex`. Just make sure they follow the APA6/7th style.



### 1.2.7 Abstract

- Write your abstract in `03-frontmatter/abstract.tex`.

### 1.2.8 Glossary

- If you wish, you can define glossary terms in `glossary.tex` – it could work even with acronyms. Check out <https://www.overleaf.com/learn/latex/Glossaries>
- Update `\loadglsentries{glossary}` with the correct filename.
- Remember to mention at least once a term from the glossary, e.g. Algorithm, else the file won't be rendered.

### 1.2.9 Lists of Figures and Tables

- These are generated automatically. No manual editing is necessary.

### 1.2.10 Main Chapters

- Add your content in individual chapter files, by splitting them in sub-units (e.g., `01-chapters/chapt-01/ch011.tex`) or not (could even be a file per chapter).

### 1.2.11 Bibliography

- Add your references to `references.bib`.
- Update `\addbibresource{references.bib}` with the correct filename.
- Quote the references – like Goddard, 2020, else the bibliography will not generate.
- Bibliography is printed automatically with `\printbibliography`.

## 1.2.12 Appendices

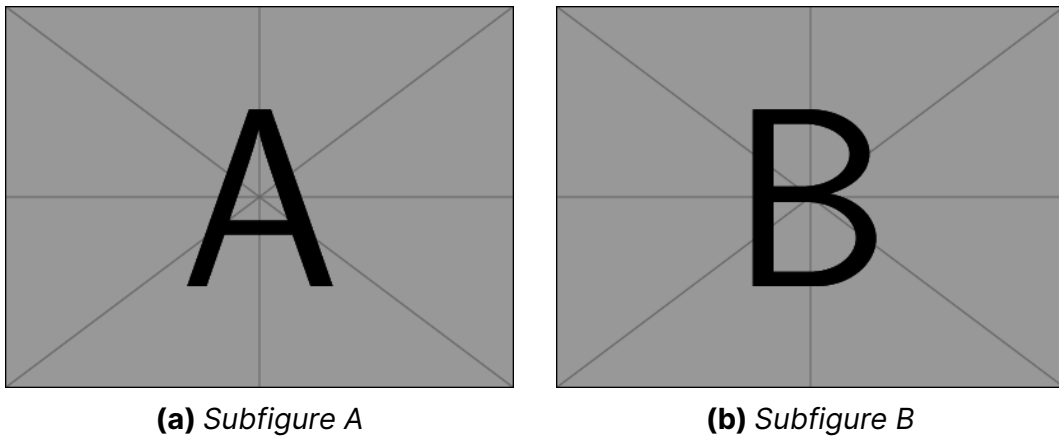
- Populate appendices in 04-appendices/.
- Add each appendix using `\include{04-appendices/app01.tex}` in your main document. You can also embedded pdfs or any other written content, using listings; check out the appendices A and B.

## 1.2.13 Compile Document

- Remember to hit Recompile!

## 1.3 Images and Graphics

This section is devoted to test various ways to insert images.



**Figure 1.1:** *Two Images in a Page*

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin vel justo sit amet lacus ultrices lacinia non ac nulla. Sed nec finibus elit. Curabitur ut tincidunt justo. Maecenas vel urna vitae est ullamcorper consequat id eget diam. Proin sit amet dolor vitae velit hendrerit vulputate. Integer fringilla convallis massa, at facilisis quam aliquam ac. Nullam vel suscipit magna. Integer condimentum tincidunt laoreet. Nunc non est a sem semper imperdiet.

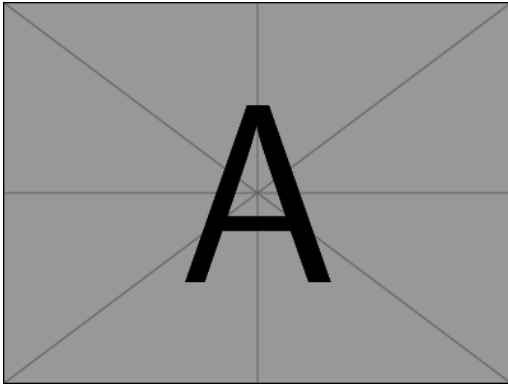
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin vel justo sit amet lacus ultrices lacinia non ac nulla. Sed nec finibus elit. Curabitur ut tincidunt justo. Maecenas vel urna vitae est ullamcorper consequat id eget diam. Proin sit amet dolor vitae velit hendrerit vulputate. Integer fringilla convallis massa, at facilisis quam aliquam ac. Nullam vel suscipit magna. Integer condimentum tincidunt laoreet. Nunc non est a sem semper imperdiet.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin vel justo sit amet lacus ultrices lacinia non ac nulla. Sed nec finibus elit. Curabitur ut tincidunt justo. Maecenas vel urna vitae est ullamcorper consequat id eget diam. Proin sit amet dolor vitae velit hendrerit vulputate. Integer fringilla con-

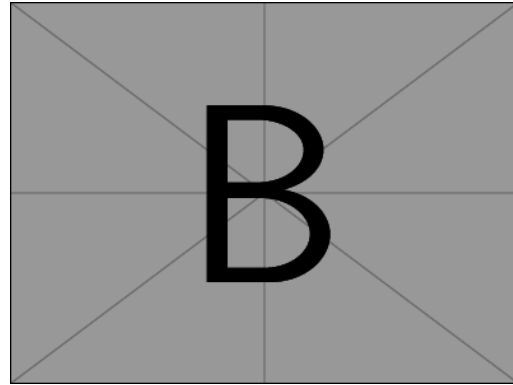


**Figure 1.2:** *This is just a random meme for display - one of my favourites actually. Source: [High Impact PhD Memes](#).*

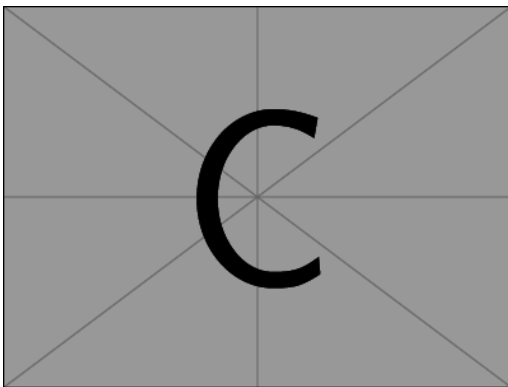
vallis massa, at facilisis quam aliquam ac. Nullam vel suscipit magna. Integer condimentum tincidunt laoreet. Nunc non est a sem semper imperdiet.



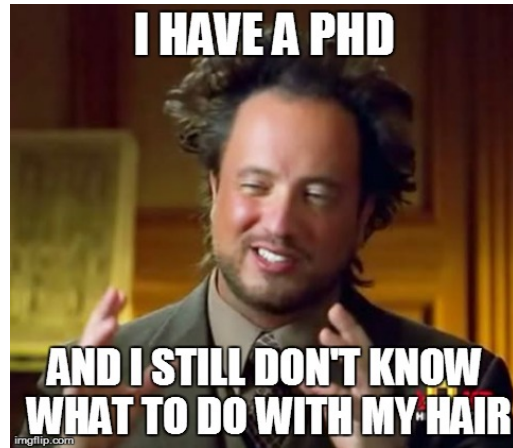
(a) Subfigure A



(b) Subfigure B



(c) Subfigure C



(d) Subfigure D

**Figure 1.3:** Four Images. Remember to edit them to get the same size!

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin vel justo sit amet lacus ultrices lacinia non ac nulla. Sed nec finibus elit. Curabitur ut tincidunt justo. Maecenas vel urna vitae est ullamcorper consequat id eget diam. Proin sit amet dolor vitae velit hendrerit vulputate. Integer fringilla convallis massa, at facilisis quam aliquam ac. Nullam vel suscipit magna. Integer condimentum tincidunt laoreet. Nunc non est a sem semper imperdiet.

# 2

## Painful tables and how to rule them

In this chapter are presented two examples of formatted tables, optimised for clarity and visual appeal. In the next page follows the explanation of the code for tab. 2.1 – you should be able to understand how this is written.

**Table 2.1:** *Data Collection for Case Study*

<b>ID</b>	<b>Case Study</b>	<b>Dataset Size</b>	<b>Description</b>
1	Case A	150 participants	Examined user behavior in online forums
2	Case B	75 participants	Analyzed user interactions in social media
3	Case C	120 participants	Studied information-seeking patterns in libraries
4	Case D	200 participants	Investigated information sharing in virtual teams
5	Case E	85 participants	Explored information retrieval in search engines
6	Case F	110 participants	Analyzed user experiences with e-commerce websites

```

\begin{table}[ht]
  % This begins the table environment. The [h] indicates that the
  % → table should be placed "here," near the text where it's defined.
  \centering
  % This centers the table horizontally.
  \small
  % Reduces the font size of the table for better fit within the
  % → document.
  \caption{Data Collection for Case Study}
  % Adds a caption to the table.
  \begin{tabular}{cccp{6cm}}
    % Starts the table structure. cccp{6cm} defines four columns:
    % → three centered (c) and one with a fixed width of 6cm
    % → (p{6cm}).
    \hline
    % Inserts horizontal lines to separate the header row from the
    % → data rows.
    \textbf{ID} & \textbf{Case Study} & \textbf{Dataset Size} & \textbf{Description} \\
    % Defines the header row with bold text.
    \hline
    % Inserts horizontal lines between each row for clarity.
    1 & Case A & 150 participants & Examined user behavior in
    % → online forums \\
    2 & Case B & 75 participants & Analyzed user interactions in
    % → social media \\
    3 & Case C & 120 participants & Studied information-seeking
    % → patterns in libraries \\
    4 & Case D & 200 participants & Investigated information
    % → sharing in virtual teams \\
    5 & Case E & 85 participants & Explored information retrieval in
    % → search engines \\
    6 & Case F & 110 participants & Analyzed user experiences with
    % → e-commerce websites \\
    \hline
    % Closes the tabular environment.
  \end{tabular}
  % Ends the table environment.
\end{table}

```

Listing 1: Code for table 2.1

---

```

\begin{table}[ht] % Begin a table environment with the placement
→ specifier [ht] (here and top)
  \centering\small % Center the table and set the font size to small
  \begin{tabular}{|l|l|l|p{6cm}|} % Begin a tabular environment
→ with four columns, specifying their alignment and width
    \hline % Draw a horizontal line at the top of the table
    \textbf{Day} & \textbf{Min Temp} & \textbf{Max Temp} &
→ \textbf{Summary} \\ \hline % Header row with bold
→ text, followed by a horizontal line
    Monday & 11°C & 22°C & A clear day with lots of sunshine.
    However, the strong breeze will bring down the temperatures.
→ \\ \hline % Row with data and a horizontal line
    Tuesday & 9°C & 19°C & Cloudy with rain, across many
→ northern regions. Clear spells across most of Scotland and
→ Northern Ireland,
    but rain reaching the far northwest. \\ \hline % Another row
→ with data and a horizontal line
    Wednesday & 10°C & 21°C & Rain will still linger for the
→ morning. Conditions will improve by early afternoon and
→ continue
    throughout the evening. \\ % Another row with data
    \hline % Draw a horizontal line at the bottom of the table
  \end{tabular} % End the tabular environment
  \caption{Weather Forecast Table \cite{latex-tables}} % Add a
→ caption to the table
  \label{table:dummy} % Label the table for cross-referencing
\end{table} % End the table environment

```

**Listing 2:** Code for table 2.2



Day	Min Temp	Max Temp	Summary
Monday	11°C	22°C	A clear day with lots of sunshine. However, the strong breeze will bring down the temperatures.
Tuesday	9°C	19°C	Cloudy with rain, across many northern regions. Clear spells across most of Scotland and Northern Ireland, but rain reaching the far northwest.
Wednesday	10°C	21°C	Rain will still linger for the morning. Conditions will improve by early afternoon and continue throughout the evening.

**Table 2.2:** Dummy table from Wikipedia; for some examples see <https://en.wikibooks.org/wiki/LaTeX/Tables>

# Bibliography

Goddard, C. (2020). De-Anglicising humour studies. *The European Journal of Humour Research*, 8(4), 48–58. <https://doi.org/10.7592/EJHR2020.8.4.Goddard>

# Appendices

## A External code chunks

```
% Define document type
\documentclass{article}
% Load required packages
\usepackage[english]{babel}
% Write down the title
\title{Title of the paper}
% Specify the author(s)
\author{Name Surname}
% Declare the beginning of the document
\begin{document}
% Print the title
\maketitle
% Add a section
\section{Title of the section}
% Write some content
Hello world!
% Add a subsection
\subsection{Title of the subsection}
... adding some more stuff ...
% Close the document
\end{document}
```

**Listing 3:** Example from the  $\LaTeX$  manual

## B Alternative thesis specs from a PDF



### Graduate Research Board

#### Principles for the Production of Alternative Thesis Format (Theses as a Collection of Papers)

##### 1. Introduction

The Academic Regulations note that a Governing Board may make arrangements for the examination of theses presented in alternative formats. These principles, developed by the Graduate Research Board, refer to the alternative format described as:

“a collection of papers of publishable/peer reviewed standard describing a coherent programme of research, accompanied by a critical and theoretical overview of the work presented in the papers” (Section 7.53).

These guidelines apply to the Doctor of Philosophy (PhD), the Doctor of Medicine (MD) and to Professional Doctorate degrees.

Please note that the document presents high level guidelines on this thesis format. Students, in Schools that use this format, should ensure that they consult their supervisor/Research Studies Panel (RSP) for guidance on local norms and practices regarding the number of papers, quality of papers and where reference to shared research has occurred (statement of authorship etc).

Additional information on the production of theses can be found on the Graduate Studies Document Repository.<sup>1</sup>

##### 2. Principles of Alternative Thesis Format (Thesis as a Collection of Papers)

###### a. *Decision on Format*

A decision on the thesis format should be made by the student in consultation with their supervisor(s) and other members of the Research Studies Panel. It is recommended that the decision normally be made at the time of the Stage Transfer Assessment when the research plan is clearly defined, and research is underway.

###### b. *Number of Papers*

It is recommended that the thesis normally comprise three or more papers but it is acknowledged that a ‘normal’ number may vary across specific disciplines. Students should discuss discipline specific guidelines with their supervisor(s) and RSP. If it is not possible to identify at least two publishable papers, that can form the basis of a thesis of an appropriate length, then the ‘traditional’ monograph format may be more appropriate.

---

<sup>1</sup> [https://www.ucd.ie/graduatestudies/t4media/Guidelines for Prep, Submission Examination of Research Theses.pdf](https://www.ucd.ie/graduatestudies/t4media/Guidelines%20for%20Prep,%20Submission%20Examination%20of%20Research%20Theses.pdf)

*c. Thesis Structure*

- i.* As in a traditional monograph, candidates pursuing this alternative format should provide an overview of the thesis as a whole and a separate discussion of the research findings. Typically, the thesis will – as appropriate to the discipline – describe the rationale for the research, include a literature review or theory chapter contextualizing the research, a separate methodology chapter as appropriate, and a concluding or discussion chapter. It is recommended that candidates discuss word or page limits for the introductory and concluding chapters with their supervisor(s) and Research Studies Panel, as norms will vary across disciplines.
- ii.* Published papers should not normally be included in the body of the thesis but should be adapted to ensure a consistent and uniform presentation style throughout the thesis. Candidates should be aware of copyright issues and discuss these with their supervisor(s) and RSP members. To avoid such issues, it is recommended that the penultimate version of a paper accepted for publication – rather than the final version – be adapted for inclusion in the thesis. Candidates may use digital object identifiers (DOIs) to link to forthcoming or published papers so that these may be easily accessed by the examiners.
- iii.* Review papers that provide background material may be included but only if the candidate is the first author. Such papers generally do not count as original contributions unless they provide substantive meta-analyses.
- iv.* Methods papers may be included where new methods have been developed by the candidate as part of their research

*d. Originality of Research*

In line with the requirement that doctoral research is ‘original research’ (see Academic Regulations, Section 7.32, and UCD Policy on Graduate Research Theses), the papers included in the thesis should not include research by a fellow student that has been presented or will be presented for examination in another thesis.

*e. Authorship, Supervisor Involvement & Acknowledgements*

The student should be the sole author, or the lead/primary author of papers included in the thesis. In some disciplines sole authorship is the norm. In other disciplines, where research is typically undertaken within a research group overseen by the supervisor/s (often the principal investigator/s) the papers should include the supervisor/s as author/s. Where papers have been jointly authored or multi-authored, the nature and extent of the candidate’s contribution and the contribution of any co-authors should be formally stated in the thesis. It is recommended that the student discuss College and/or discipline specific guidelines with their supervisor and RSP. The form in section provides a mechanism for collecting this information.

**C. Acknowledgement of Authorship (Template)**

The form below provides a useful mechanism for collecting the information needed to ensure that shared authorship is appropriately acknowledged in a thesis (and acts as a guide to the minimum information that should be included in an acknowledgement of authorship). This form can be completed for each paper included in a thesis.

<b>1. Student Details</b>	
Student Name:	
Student Number:	E-mail:
School:	
Principal supervisor:	E-mail:
Research Degree for which thesis is being submitted:	
Title of Research thesis:	
<b>2. Student Contribution to the Paper</b>	
This co-authorship declaration applies to the following paper:	
A percentage must be specified as well as a brief outline of the student's intellectual and practical contribution to the research presented in the paper. Each section of the paper should be listed separately.( eg Introduction, Methods, Figure 1, Table 2 etc.)	
Percentage Contribution %: _____	
Outline of student contribution for each section of paper:	
<b>3. Other Authors contribution to the paper</b> (Outline briefly the contribution of other authors to the paper )	
Author	Contribution
	% Contribution: _____ Brief outline of contribution:
	% Contribution: _____ Brief outline of contribution:
	% Contribution: _____ Brief outline of contribution:

**Version History**

#	Author	Content/Changes
1	Assoc. Prof. N. Brady, Graduate Research Board	Version 1 of Guidelines

If you have a query about this document, contact details for the GRB supports for School can be found at <https://www.ucd.ie/graduatestudies/graduateresearchboard>.

oOo