

DEPARTMENT OF STATISTICS

HONOURS RESEARCH REPORT COURSE INFORMATION 2022

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INTRODUCTION

The aim of this document is to provide guidelines for the research management process and to establish criteria for the evaluation and grading of the honours research report (WST/STK 795).

CONTENT OF THE RESEARCH REPORT

The research report is carried out under supervision of academic staff (supervisor(s)) in the Department of Statistics, UP. The research report is an independent study and should clearly illustrate the student's mastering of the topic. The following aspects are crucial to the construction of a good research report:

- A clear formulation of the topic/problem illustrated with real situations where the topic/problem is experienced;
- An overview of relevant literature from text books, scientific reports and articles (The relevant references must be unambiguously stated and the student can only use that to support his own understanding of the topic);
- A write-up of the statistical theory of the topic (**This is the focus of the research report, as well as the poster, and should illustrate the student has mastered the theory**);
- Computer programs/simulations applicable to the topic and/or application thereof.

The compulsory 3-day bootcamp (16-18 February 2022) entails a group class specifically guiding students towards the completion of the research report..

The remainder of the year will involve research and the write-up together with the assigned supervisor(s) The final written report should be at most 30 pages of the main text and written in Latex using the template provided. Refrain from writing documents in excess of 30 pages since this may be penalized. Your supervisor(s) will give clear guidance in this regard.

A student may only register for the research report once. Should the outcome not be successful the student cannot continue in the honours program. In addition, a student may not register for the research report without successful completion of the bootcamp.

A compulsory poster in landscape format, which summarizes the research and forms part of the evaluation of the essay must be developed This should not simply be a copy-and-paste from the report. **The posters will be presented by the student and the student graded by internal examiners on their knowledge in November 2022.** All students must present their poster on this set date which will be communicated during the course of the year. No exceptions will be made.

The following figure emphasizes the difference between an Honours research report, a Masters dissertation and a PhD thesis with respect to:

- The application of existing theory, models and methods to a problem,
- The testing of existing theory, models and methods in order to develop new or improved theories, models and methods.

Remember that applying a known model to a new application is also "new", however the emphasis is on contribution to the field of statistics.

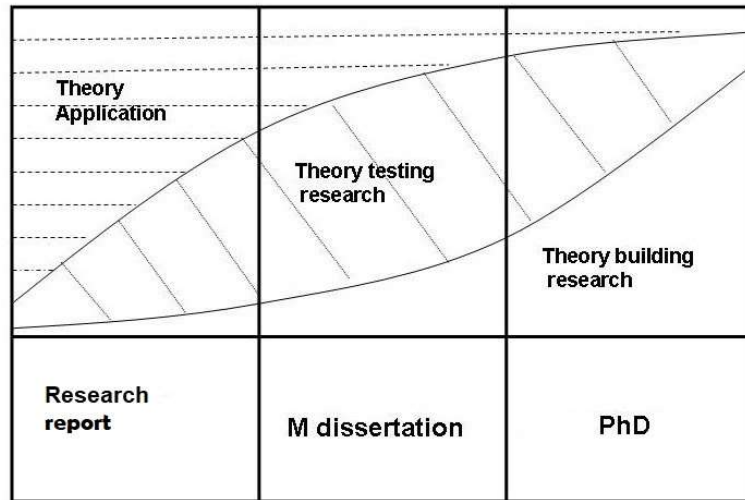


Figure 1: Research report, dissertation and thesis

RESEARCH TOPIC

A list of possible topics from which students may choose, in consultation with the head of department, will be made available by the Department. Registration and allocation of topic (and by implication a supervisor(s)) will be dealt with by the Head of the Department and research report coordinators during the week of the bootcamp; details will be conveyed by email. An MOU will be signed for the research report.

Students are warned against **plagiarism** when they write up the findings of their literature study. The final report (as well as all preliminary reports and the poster) will be submitted via ClickUp and through TurnItIn in the research report ClickUp module (WST/STK 795). Supervisors are required to confirm the TurnItIn result is acceptable and include this in their final report. Any final TurnItIn similarity report with an index higher than 20% will be referred to the Legal Unit of the university for investigation (note, this counts for any usual module as well).

PLAGIARISM IS COMMITTED WHEN SOMEONE USES ANOTHER PERSON'S WORDS, IDEAS OR OPINIONS WITHOUT PROPER ACKNOWLEDGMENT. SPECIAL CARE SHOULD BE TAKEN REGARDING INFORMATION TAKEN FROM WEBSITES AND OTHER ELECTRONIC SOURCES

A student committing any form or degree of plagiarism will fail the report and the necessary disciplinary action will be taken.

SUBJECT LITERATURE

Various search engines exist, which can be used to find: journals, catalogues, books, research papers and theses. A training session on the library will be presented at the bootcamp by the library personnel. Allocated supervisor(s) are also equipped to assist the candidate to use search engines, please consult your supervisor(s) in this regard.

An overview of the relevant literature available on the topic forms an integral part of the research report.

RESEARCH MANAGEMENT PROCESS FOR HONOURS RESEARCH REPORT

The following is a schedule of **milestones** for the Honours research report. The study leaders will regularly inform the postgraduate committee on the status and progress of the research report as indicated below.

MILESTONES/EVENTS	MILESTONE DATES
1. 3 Day Bootcamp – compulsory preparation course	16-18 February 2022
2. Research report topic registration and allocation	16-18 February 2022
3. Students and supervisors begin regular (virtual) meetings for the research project (<u>at least</u> every second week)	From 21 February 2022 onwards
4. 4 May: Proposal Submission (topic description and literature review) Hand in via ClickUp by midnight. 5 May: Peer Review Feedback Handin (Online) 6 May: General discussion on Feedback 12:00 – 13:00	4 May, 5,6 May 2022
5. Writing retreat (presented virtually) (compulsory)	Date to be announced – honours students
6. 12 August: topic description with literature review and completed theory section handed in via ClickUp and to Supervisor(s) by midnight (almost 100% complete except for the full application section). Only feedback from your supervisor will be received.	12 August 2022
8. Final completed document submitted via ClickUp by midnight for examination.	4 November 2022
9. Final poster submitted via ClickUp by midnight	4 November 2022
10. Presentation and evaluation of posters at presentation evening.	TBD

NOTE:

- It is the responsibility of the student to ensure that he/she has regular contact with the supervisor(s), as well as informing the supervisor(s) of the progress regarding the research report. A meeting at least every two weeks is **highly** recommended. Responsibility and maturity to keep meetings is expected.
- If a student does not meet the supervisor frequently and the progress of the research report is insufficient to such an extent that the above milestones are not met, **the student will not pass the research module**. Note the regulations of postgraduate study in the Department of Statistics in this regard: a student who fails the research module WST/STK795 will face expulsion from the program.
- **Late documents will not be accepted.**

STRUCTURE OF RESEARCH REPORT

The research report is the final embodiment of the student's research project. The reader should never be in doubt as to where they are in this process. Do not force the reader to read the whole document before they get the message. The report should thus be written clearly and concisely.

The following format is required (a template will be provided for your consideration, **but is not necessary to be used** consult your supervisor):

- (a) The research report should start with a *Title page, Acknowledgements, Summary/Abstract* (i.e. a 200 word synopsis of the topic, giving major points, conclusion(s)); *Table of contents*.
- (b) *A statement by the student declaring that the work is their own, co-signed by the supervisor.*
- (c) *Introduction/Background*

It should present the motivation for selecting the particular topic/problem (the rationale of the study)
- (d) *The main body* (sections) of the research report should comprise the following:
 - *A comprehensive overview of relevant literature* e.g. text books, scientific reports and articles regarding the theory and past research related to the research topic/problem. It is very important that the student must consult the latest publications in the field of study. Text references must give the author's surname, year of publication and page reference.
 - The theory should be embodied in conceptual models (graphical, mathematical or schematic descriptions).
 - In the case of an application study the student must present the theory of the model he/she wishes to test or apply. (**Clear reference to data sources must be given.**)
- (e) The study must conclude with a section titled: *Conclusions and recommendations*. An honest appraisal of what you have accomplished.
- (f) List of *References* and *Appendices*.

GUIDELINES FOR POSTER DESIGN

Avoid long paragraphs - point form and tables are clearer; include graphics rather than text where possible; only include main references. Be very careful not to clutter the images with too much detail.

Introduction

Clearly state what you are going to present
 Background / The problem statement
 Importance of the research topic/problem

Body: Theoretical framework

State what you want the viewer to know
 Theory and research overview (this must be the focus of the poster)
 Current theories; models (Use nice clear graphics)

Conclusion Data analysis

State what you have presented
Contributions to theory
Recommendations

PRESENTATION SKILLS FOR POSTER PRESENTATION EVENING
Students should prepare thoroughly for their poster presentation.

The following are guidelines:

Have a short summary prepared for each new audience member who passes by;

Don't read only what is on the poster;

Be prepared to answer questions and engage with the audience.

ASSESSMENT OF RESEARCH REPORT

GUIDELINES FOR ASSESSMENT OF WRITTEN RESEARCH REPORT WILL BE AVAILABLE FROM YOUR SUPERVISOR(S).