

Thesis Writing Guidelines

Preliminary version 01.01.2021.
2020/21/2

1. Content requirements

To obtain a diploma, students are required to write a bachelor or master thesis for subjects holding specific credits defined in the education and outcome requirements and the curriculum. Students have to write an independent bachelor or master thesis for each programme (training). The topic of the bachelor or master thesis is required to be within the framework of the education and outcome requirements. Subjects related to the writing of a bachelor or master thesis are compulsory subjects evaluated with mid-term grades. The grade for a subject is determined by the supervisor based on the student's achievement during the term and the subject requirement. The writing process of a bachelor or master thesis is controlled by a supervisor whose work may be supported by engaging a thesis advisor.

1.1. Master Thesis

The Master Thesis should prove that the author can apply the learned mathematical theories and methods independently in mathematical, engineering or economical science or can solve or model a mathematical problems even for companies; moreover can present the new ideas or solutions in an exact, clear way.

1.2. Bachelor Thesis

The author should introduce the main topic, explain in details the model or solution and interpret the results.

2. Main structural points of the Thesis

2.1. The language of the Thesis

The language of the Bachelor Thesis can be Hungarian or English. The language of the Master Thesis can be Hungarian or English if the language of the training is Hungarian. The language of the Master Thesis should be English if the language of the training is English. Writing the Thesis in other languages is possible only with the approval of the corresponding head of the department.

2.2. Layout and Appearance

Page size: A4, Font size: 12, Line spacing: 1.5. Length: Bachelor Thesis 30-50 pages, Master Thesis 35-60 pages. (From title page to the end of bibliography.)

Ordering of parts

- Title page.
- Copyright notice.
- Acknowledgement or dedications. (Optional.)
- Table of contents.
- List of Figures, Tables, Illustrations, Abbreviations.
- Body of the thesis.
- Discussion: Presenting your results, showing how it relates to previous results.
- Bibliography.
- Appendices. (If needed.)

2.3. Sections

The writer should take care to ensure that sentences and paragraphs flow logically from each other. The text can be divided to sections, subsections and subsubsections, but it should be logical and should clearly reflect the topics discussed in the corresponding text.

2.4. Text

The thesis should be written for a reader who is a specialist in the discipline but not necessarily a specialist on the specific topic or question. The notations and formulas should follow the widely accepted scientific conventions.

2.5. Tables, figures and equations

The illustrations should be edited or drawn images with high resolution. The figures and the tables should be centered on the page. Captions related to the illustrations should appear on the same page as the material itself. All tables and figures should also be numbered and should be referred in the text.

The notations in formulas, diagrams, tables, and throughout the work should be consistent and should follow the notations of scientific life.

2.6. Referring numbers

Strongly recommended to write the Thesis in \LaTeX for many reasons. The numbering of equations is done automatically in \LaTeX in the usual scientific format. To reference a \LaTeX table or equation you need to make sure that you insert a `\label{...}` command in your table or equation.

To easily reference an item in the bibliography suggested to use `\cite{...}` command in \LaTeX . It produces automatically the symbol of the referred item in a square bracket.

2.7. Bibliography

Bibliographical data of all books, articles, data, websites, etc. cited directly or paraphrased in your thesis, should be listed in the bibliography, at the end of your thesis.

The bibliography should contain all the bibliographical data of cited materials in a uniform format.

- Author(s).
- Title.
- Details of publications, see below for examples.

Journal article:

[*Reference*] Author(s). Title of the article. *Journal title or official journal Title abbreviation*, volume number (issue number): Page numbers from-to, year of publication.

Example:

[34] A. Fujiwara. An estimation theoretical characterization of coherent states. *J. Math. Phys.*, 40(9): 4227–4239, 1999.

Book:

[*Reference*] Author. *Title of the book*. Title of series and number of series (if the book in a series). Name of publisher, place of publication (if known), year of publication.

Example:

[35] J. Conway. *A Course in Functional Analysis*. Graduate Texts in Mathematics 96. Springer Verlag, 1990.

The above mentioned reference schemes can be modified if it is approved by the supervisor.

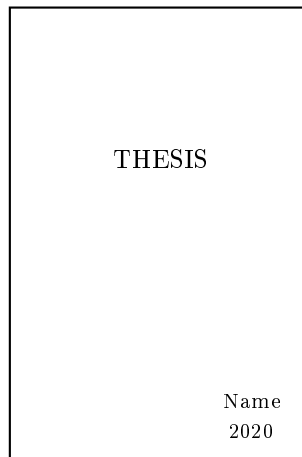
2.8. Abstract

Page size: A4, Font size: 12, Line spacing: 1, Length: 1/2-1 page.
Its purpose is to summarize the thesis a clear, but concise way. Should contain the studied problem or theory, the methodology and list of the main results and conclusions.

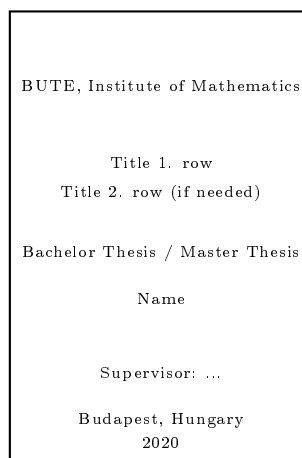
2.9. Binding

Hard copies should be black, hardbound, the word THESIS written in golden letters in the middle of the cover page, and the name and year in the bottom right corner of the page.

An example for *Binding cover page*:



An example for *Title page*:



3. Deadlines, copies to be submitted

Students need to send the Thesis and extract of the Thesis (1/2–1 A4page, including name, title, supervisor and brief summary of the Thesis) in pdf format to the `zv@math.bme.hu` email address.

Deadline: Friday 12.00 of the 1-week-long repeat period of the semester (21st May).

Late submission: Requests based on equity may be submitted about late submission. If the request is accepted, the thesis can be submitted in the above mentioned way.

Deadline: Friday 12.00 28th May.

4. Evaluation

The Bachelor Thesis is evaluated by the supervisor.

The Master Thesis is evaluated by the supervisor and by an independent referee.

The evaluations should be submitted to the email address `zv@math.bme.hu` by the end of the second week of the exam period.

The evaluations will be sent to the student at least five days before the defense. The students need to defend their thesis during a short presentation on their final exam. The presentation needs to be concise, comprehensive, highlighting own research work and results. After the presentation the reviewers' comments and questions should be answered first after the questions posed by the Final Examination Board.

The final mark for the Thesis is depends on the evaluations, presentation and answers to the questions. The final mark is given by the Final Examination Board.