

VILNIUS UNIVERSITY  
INSTITUTE OF COMPUTER SCIENCE  
INFORMATICS STUDY PROGRAMME

## STRUCTURE OF THE FINAL MASTER'S THESIS

### 1. Parts of a Thesis

Table 1.

No.	Part	Notes
1.	Title or Cover page	See example in Appendix 1
2.	Acknowledgements to individuals and/or organizations	Unnumbered, optional part, presented on a separate page
3.	Summary in English	Unnumbered part, no longer than 0,5 pages, presented on a separate page
4.	Summary in Lithuania (Santrauka)	Unnumbered part, no longer than 0,5 pages, presented on a separate page
5.	Table of contents	Unnumbered part, see example in Appendix 2
6.	Introduction / Preface	Unnumbered part, starts on a new page
7.	Main material	Numbered chapters, sections, and subsections. Each chapter starts on a new page
8.	Results and conclusions	Unnumbered part, starts on a new page
9.	References	Unnumbered part, starts on a new page. See example in Appendix 3,
10.	Definitions of the terms	Unnumbered, optional part
11.	Abbreviations	Unnumbered, optional part
12.	Appendices	Unnumbered, optional part. Individual appendices are numbered and named

**In the title page** the following information must be listed (see example in Appendix 1):

- Names of the university, faculty and study program;
- Title of the thesis in English and Lithuanian;
- Kind of the document (i.e., Master's thesis);
- Name and surname of the student who carried out the work (no course or group is needed to be mentioned);
- Position, degree, name and surname of the supervisor;
- Position, degree, name and surname of the reviewer;
- Place and year when the thesis was written.

**Acknowledgements to individuals and/or organizations** part expresses gratitude to other individuals and/or external organizations that contributed to the successful work completion. For instance, students, who have used VU MIF supercomputer resources for their work, must mention the IT Research center in

the acknowledgements part of their Master thesis, for example: “The author is thankful for the high performance computing (HPC) resources provided by the Information Technology Research Center of Vilnius University.”

**The summaries in English and Lithuanian** briefly describe the contents of the work, the problem(s) analyzed and the conclusions drawn. Keywords of the Master’s thesis must be listed at the end of the summaries. The summaries in English and Lithuanian are written on separate pages and each one cannot be longer than 0,5 page. If help in writing or proof reading the Lithuanian summary is needed, the work supervisor may be contacted.

**The table of contents** lists titles of the thesis parts and the pages on which they start, from the thesis introduction to its annexes in the ascending order of pages numbers (see Appendix 2 for an example). The table of contents itself is not included in this list.

**The introduction** describes relevance of the chosen topic, defines the object of research, clearly formulates the aim and objectives of the Master’s thesis, discusses the theoretical background and suitable methodology of the investigation, refers to the main literature or other sources relevant to the topic, identifies the instruments (software, etc.) to be used, as well as describes the results planned to be obtained. The recommended length of the introduction is 3-4 pages.

**The main material chapters** of the thesis provide details on the conducted research: initial data, methods of their analysis and processing, implementation of solutions, summary of the results obtained. The layout of this part is highly dependent on the thesis topic. However, it must include chapters or sections giving a review of literature sources, methods, and tools used in the thesis, followed by a description of how the planned objectives or solutions were implemented, as well as the chapter(s) presenting analysis of the results achieved and their comparison with other known solutions. Chapters may have sections, subsections, and other needed structural parts.

**In the results and conclusions** part the main results of the thesis are presented (what was analyzed, developed, and implemented) and conclusions are drawn (emphasizing the differences in comparison to other approaches in the same problem area, proposing recommendations, highlighting innovations).

**The list of references** includes literature and other sources used. Bibliographic descriptions of the (cited, quoted, paraphrased or just mentioned in the thesis) scientific publications or other sources are presented in alphabetical order. The list of references starts on a new page. For an example, see Appendix 3.

**Lists of definitions and abbreviations** should be provided when special terms requiring explanation and less commonly used abbreviations are used in the thesis text.

**Appendices** may contain supporting material, especially the material prepared independently by the author. Standalone attachments can be also provided in supplementary files. The appendices should be separately numbered and named. The thesis text must contain references to all the appendices.

## 2. General Text Requirements

**Format, density and font.** The thesis is prepared on a computer and (if needed) printed on one side of an A4 white sheet. The formatting, font, and numbering requirements:

- 28-32 lines per page.
- Page margins:
  - top – 2 cm;

- bottom – 2 cm;
- left – 3 cm;
- right – 1.5 cm.
- Font style and size:
  - Main text:
    - size – 12 pt;
    - font - Palemon or Times New Roman, regular;
    - line spacing – 1.5.
  - Paragraphs – begin with 1 cm indentation;
  - Headings – size 14 pt, bold font;
  - Footnotes – size 10 pt, regular font;
  - Appendices – size 10 pt, regular font;
  - List of references – size 12 pt, regular font.
- Page numbering:
  - Using Arabic numerals;
  - at the page bottom;
  - on the page right;
  - the title page is not numbered.

**Numbering of chapters of the work.** Chapters are divided into sections, sections into subsections, subsections into paragraphs. They are all numbered using Arabic numerals. Section numbers should consist of the chapter number and section number in that chapter; the number of the subsections should consist of the chapter number, section number and subsection number in that section; the number of the paragraph should consist of the chapter number, section number, subsection number and paragraph number in that subsection. Numbers of a chapter, a section, a subsection and a paragraph are separated from each other by dots, for example:

1. Chapter name\_1
  - 1.1. Section name\_11
    - 1.1.1. Subsection name\_1
    - 1.1.2. Subsection name\_2
      - 1.1.2.1. Paragraph name\_1
      - 1.1.2.2. Paragraph name\_2
  - 1.2. Section name\_12
  - 1.3. Section name\_13
2. Chapter name\_2
  - 2.1. Section name\_21
  - 2.2. Section name\_22
3. Chapter name\_3

Chapters of the main material part must always start on a new page. Smaller parts are not a subject of this requirement.

**Binding.** If a hard copy is required, a final Master’s thesis is submitted bound.

**Spelling and punctuation.** A final thesis must comply with the current spelling and punctuation norms.

**Quotes.** Literal quotes are written within quotation marks, e.g. “This text is taken from ...”. Texts must be quoted in a strict accordance with the source. Even obvious proofreading errors in the quoted source cannot be corrected. Cited sources are referred in the text itself, in square brackets, using an identifier from the reference list, e.g., [Cyr84, TG97]. The full bibliographic description of the cited source is provided in the reference list.

**Footnotes.** Footnotes are for notes or comments. They must be numbered continuously throughout the Master's thesis. They must be typed using the font size 10 pt, with 1.5 line spacing.

**Tables and pictures** (images, illustrations, diagrams, charts, graphs). Tables and pictures are numbered consecutively throughout the Master's thesis using Arabic numerals. Their formatting requirements:

- **The title of the table** should be above the table in font size 10 pt, (e.g., *Table 3: Software requirements*);
- **The title of a picture** is written at the bottom using the font size 10 pt (e.g., *Figure 15: Work schedule*).

Tables, illustrations, diagrams, etc. should not take more space than the main text in a Master's thesis. They must be referred (by their number), explained, and discussed in the main text. If they are taken from other publications, the source and authorship must be indicated.

### **Rules for bibliographic description of sources**

The sources used in the thesis are indicated according to the uniform rules of bibliographic source description (LST ISO 690). The reference list provides bibliographic descriptions of the sources in the alphabetical order. The sources in the list are identified by suitable identifiers in the form [AutMmR]. General rules are as follows:

- if there is one author of the source, the first three letters of the author's surname (first uppercase, the other two lowercase) shall be written instead of Aut;
- if there are two or three authors, Aut is the first capital letters of all the author surnames;
- if there are four or more authors, Aut is the first capital letters of the first three authors followed by the symbol +;
- Mm stands for the last two digits of the year;
- R is a letter "a", "b", "c", etc. to obtain the uniqueness of the identifier. Used only when the AutMm part is not unique (see example in Appendix 3).

A bibliographic description must contain essential source bibliographic information. Besides the author name(s) and the title of an article/a book, it should include the journal name and its volume (if it is a journal paper), the conference name (if it is a conference paper), the book name (if it is a book chapter), the publisher, the page numbers (unless it is a whole book), the publishing year. The source DOI link (if such one exists) is recommended to include as additional information.

## Appendix 1. Title page (example)



VILNIUS UNIVERSITY  
FACULTY OF MATHEMATICS AND INFORMATICS  
INFORMATICS STUDY PROGRAMME

**Verification methods for cyber-physical systems**

**Kiber-fizinių sistemų verifikavimo metodai**

Research work (part I/ part II / part III) / Master's thesis

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Reviewer: assoc. prof. Kazys Kaziūnas

## Appendix 2. Table of contents (example)

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*Note that the chapter, subsection, paragraph, or subparagraph numbers must end with a period and begin with a capital letter. There is no full stop at the end of the title.*

### Appendix 3. Reference list (example)

#### REFERENCES

- [ADB+09] P. Abate, R. Di Cosmo, J. Boender, and S. Zacchiroli. Strong dependencies between software components. In *Proceedings of the 2009 3rd International Symposium on Empirical Software Engineering and Measurement*, ESEM 09, pages 89–99. IEEE Computer Society, 2009. DOI: 10.1109/ESEM.2009.5316017
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URL: <[http://www.stsc.hill.af.mil/resources/tech\\_docs/gsam3.html](http://www.stsc.hill.af.mil/resources/tech_docs/gsam3.html)>
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*Note that the sources are arranged alphabetically by the identifiers assigned to them, and the identifiers are printed at the beginning of each list item.*