A Master thesis in computer science, in engineering sciences, addresses a scientific problem and presents a solution to this problem. MSc students discuss a formulated scientific problem, present their knowledge of the state of the art and perform their scientific research in the domain in question. An elaborated technical solution to the problem confirms their engineering skills.

Minimal requirements for Master Thesis

Substantive requirements

1. The thesis holds:
    a. **Introduction** to the problem, definition of problem domain, objective of the thesis, scope of the thesis, concise description of chapters, clear description of author's contribution.
    b. **Analysis of the problem**, introduction to the problem domain, formal definition of the problem, definitions, notations, literature review, state of the art (with references to all sources), description of known solutions, algorithms.
    c. **Subject of the thesis** – solution to the problem proposed by the author, theoretical analysis of the solution, rationale for applied methods, algorithms, and tools.
    d. **Experiments** – description of research framework, description of methodology of experiments, wide analysis and discussion of achieved results, conclusions.
    e. **Summary** – synthetic description of performed works, conclusions, future directions of research. Has the objective of the thesis been reached?
2. The title of the thesis, its chapters, and sections should precisely and correctly describe the content.
3. A description of an interface of a research framework should be an appendix not a part of the body of the thesis.
4. Experiments and their analysis should be done in the way commonly accepted in the scientific community (eg. benchmark datasets, cross validation of elaborated results, reproducibility and replicability of tests etc).
5. Tables and figures should not present exactly the same information. The same information in different form is allowed in an appendix.
6. Each abbreviation should be presented in full at the first occurence. All abbreviations and symbols should be listed and explained in an appendix.

Formal requirements

1. General issues:
    a. fulfillment of conjunction of conditions:

> > i. min. 60 pages (counted from the first page of introduction to the last page of summary)
> > ii. min. 10000 words in the body of the thesis (exclusively tables, captions, codes, and pseudocodes),
> b. The thesis should comply with the provided template.
> c. Page, chapter, section, subsection, table, figure, and listing numbering is obligatory.
> d. Two versions of the thesis:
> > i. final one,
> > ii. a version without figures, tables, listings, biography, table of contents, and appendices.
> e. The technical documentation should be moved to an appendix.
> f. Declaration of the thesis supervisor on fulfillment of formal requirements.

2. Figures and tables
   a. Each figure has a number and a caption below.
   b. Each table has a number and a caption above.
   c. Each table and each figure has to be referenced at least once in the body of the thesis.
   d. A table or a figure must not be separated from its caption (eg. by page break).
   e. Figures, tables, chapters etc should be referenced with number. Do not use phrases like «the figure below» or «the table above…».
   f. All figures should be drawn by the author of the thesis.

3. Language:
   a. Use correct English – spelling, style etc.
   b. Do not use slang or informal language!
   c. Use precise language, adequate terms.

4. Math formulae
   a. Use mathematical mode for all equations, formulae, each for single symbols in text.
   b. Each formula must have a number.

5. References:
   a. All cited parts have to be clearly marked as citation (from the beginning to the end). Sources of all cited parts have to be referenced – otherwise it is plagiarism! All theses are tested with plagiarism detection systems!
   b. Figures taken from other publications (in well justified cases!) must be provided with the source.
   c. The bibliography should hold at least 10 reviewed sources (articles or books), at least 5 of them must not be more than 10 years old.
   d. All referenced sources have to be cited in the thesis.
   e. Bibliography items should be sorted by surnames of the first author. Each item has be numbered. The bibliography list should be placed after the body of the thesis.

f. A bibliography item for a book holds: author(s), title, publisher, and year.
g. A bibliography item for an article holds: author(s), title, title of journal, number, volume, pages, and year.
h. A reference list, table of contents, list of tables, list of listings are not numbered as chapters.
6. The thesis is accompanied by a CD/DVD with
    a. the text of the thesis
    b. the source code of application(s) written for the thesis, data sets needed for reproducibility and replicability of tests (Reviewers should be provided with all what is needed to verify the application(s).).

Criteria of thesis evaluation

1. Relevance of content to the thesis's title.
2. Organization of the thesis, presentation, appropriateness of chapters, etc.
3. Substantive evaluation:
   a. presentation of the state of the art
   b. quality of proposed solution
   c. clarity of presentation
   d. quality of research methodology
   e. correctness of treatment and presentation of elaborated results
   f. justification of conclusions
4. What is the novelty of the thesis?
5. literature research and reference to the related literature
6. formal soundness of the thesis (linguistic quality, technical soundness, table of contents, references)
7. possible publication of results, previous dissemination of the results