

Lappeenranta-Lahti University of Technology LUT

Master's thesis instructions 30 August 2019

The university's schools may complement these instructions with field-specific guidelines that they publish in the Uni portal or on the Moodle platform.

1. Objectives of a Master's thesis

The Master's thesis is the final project in the university's Master's degree in technology or business and amounts to 30 ECTS credits. The thesis is part of compulsory advanced specialisation studies and requires approximately six months of full-time work by the student in addition to advance preparations.

Students starting their thesis work are expected to be able to work independently and responsibly following a plan. Before completing the Master's thesis, the student must have completed a Bachelor's degree or equivalent and a number of ECTS credits towards the Master's degree considered sufficient by the supervisor of the thesis. After completing the Master's thesis, students will:

- know the principles, methods and analysis techniques related to scientific research in their field, and be able to apply them independently
- identify essential development targets related to the topic area, and be able to define and delimit a related research problem for the thesis
- be able to assess critically and utilise prior research
- be able to manage their own work: e.g. set targets and a schedule and implement them
- be able to analyse research results and report on the work coherently, credibly and in accordance with good scientific practices in the field in question.

2. Preparations, starting the work, and supervision

Students prepare in advance by reading the thesis instructions, finding a possible thesis employer, and often also by planning the topic. The actual preparations involve asking a professor or other instructor in the student's degree programme to act as the thesis supervisor. The professor or other instructor accepts the request to be the primary supervisor of the thesis or advises the student how to find one.

Two supervisors are assigned for each Master's thesis. The primary supervisor is in charge of the supervision at the university and specialises in a field closely related to the thesis. The primary supervisor may be a professor with a doctorate, an associate professor on the tenure track, or a docent at LUT. Also an LUT employee with a docentship at another university may be the primary supervisor. The secondary supervisor must have at least a Master's degree and may be employed at LUT or elsewhere, e.g. by the company that commissioned the student's thesis. The primary supervisor assigns the secondary supervisor.

Initially, the student and primary supervisor discuss at least the following:

- the prerequisites for starting the Master's thesis (completed studies)
- the objectives and requirements of the thesis
- the thesis topic and its approval
- a plan and schedule for the thesis
- funding (possible grant, employment relationship, self-funding)

- the supervisors at the university, supervision practices and meetings, the division of work between the primary and secondary supervisor
- the commissioner of the thesis and issues that must be agreed on with the commissioner: supervision at work (who supervises, supervision practices, reporting during and after the project), employment relationship issues, professional rights and responsibilities (also in the case of an invention), workplace safety, insurance coverage.
- publicity of the thesis.

3. Writing the thesis

3.1 Approval of the Master's thesis topic

After the preparation stage, the thesis topic and supervisors are approved. Students submit a topic application (form 1A) from their lut.fi address to the university's Student Services. The online form including instructions is available in the university's Uni portal. The primary supervisor approves the topic application, and Student Services informs the student of the approval. The approval of the topic remains in force for two years from the date of approval.

The topic application does not need to include the final title of the thesis. The title may be specified as the work progresses. The thesis topic may be approved when the student:

- is enrolled at the university and is a degree student in the programme to which the topic application is addressed
- has completed the Bachelor's degree (when the student has been admitted into the university for both Bachelor's and Master's studies)
- has completed possible supplementary studies (if the student has been admitted to complete only the Master's degree)
- has completed other possible studies required and announced by the school.

3.2 Language of the thesis

The thesis can be prepared in Finnish, Swedish or English. In degree programmes taught in English, also the thesis is prepared in English. The author of the thesis is responsible for the language revision of the thesis. The head of the degree programme decides on the use of languages other than the above.

3.3 Observing good scientific practice

Students are expected to know and observe the ethical principles of academic studies. Therefore, they will be instructed how to follow good scientific practice. Plagiarism is strictly forbidden. Citations and references must be made in accordance with established scientific practice. If the degree programme or supervisor require nothing else, the thesis should employ Harvard referencing.

If despite guidance and supervision the submitted thesis contains plagiarised passages, the thesis will receive a failing grade. Moreover, the matter will be brought before the university rector. The Turnitin software is employed in checking the originality of the work, giving feedback, and guidance. The university's final theses must be checked with Turnitin before assessment. Primary supervisors must make sure that all final theses they review are checked with Turnitin at least once. The student is responsible for submitting the thesis through Turnitin.

3.4 Publicity of the thesis

The primary examiner sees to it that the commissioner of the thesis is aware of the publicity requirements from the very beginning of the discussions. Master's theses submitted to the university for examination are normally public documents. The abstract is always public.

This must be mentioned to the commissioner when the topic of the thesis is first discussed. However, if the thesis needs to include information which the commissioner requires to remain confidential, the university may agree to hold the thesis confidential for a maximum of two years. In such cases, the commissioner must provide the university with a written notification concerning the confidentiality. The student is responsible for submitting the confidentiality notification to the university's Student Services no later than in connection with the assessment application. The notification must include the scope of and grounds for the confidentiality and the confidentiality period in full years. The confidentiality period starts from the date the thesis is assessed. Information that must remain confidential for more than two years must be excluded from the version submitted for assessment. The entire work will be assessed based on the submitted version of the thesis.

3.5 Inventions related to the thesis

If the student makes an invention that can be patented or otherwise protected under industrial property rights legislation during the course of the thesis work, all parties involved must discuss the matter together (the student, the supervisors at the university, and the commissioning organisation). If the invention made in connection with the thesis is to be patented, the patent application must be left before the work is published. Otherwise, the thesis must be written so that the invention is not revealed.

If the invention has ensued under an employment relationship, the Act on the Right in Employee Inventions (656/1967) applies to the company. If the employment relationship is between the student and a university or higher education institution, the act on the right in employee inventions at higher education institutions (369/2006) applies to the school. General patenting legislation applies to the patenting of an invention and general copyright legislation to copyright issues unless otherwise agreed by the parties involved in the work (the commissioner, university and student).

Further information is available from the university's research and innovation services.

3.6 Content and layout of the thesis

The thesis typically includes the following parts in the following order:

- Title page
- Abstract
- Acknowledgements
- Table of contents
- List of symbols and abbreviations
- Introduction
- Discussion
- Conclusions
- Summary
- References
- Appendices

The degree programmes or schools issue more detailed instructions on the formalities and writing of theses or reports in their fields of study. However, certain general formalities apply to the title pages and abstracts of all of the university's final theses.

Title page

The the title page contains the following information:

Lappeenranta-Lahti University of Technology LUT

Name of school: School of Energy Systems, School of Engineering Science or School of Business and Management

Name of degree programme

Title of thesis (final title)

Thesis supervisors

Abstract

The Master's thesis contains an abstract of the work. The abstract is a public document, and therefore all confidential information must be excluded from it.

Students write the abstract in two languages: the language of their basic education (Finnish or Swedish) and English. Students who have not received their basic education in Finnish or Swedish write their abstract only in English.

The abstract should start with the following information:

Type of document (Abstract)

Title of thesis

Keywords

Number of pages, figures, tables and appendices

Name of author

Type of thesis (Master's thesis) and graduation year

Lappeenranta-Lahti University of Technology LUT

Name of school: School of Energy Systems, School of Engineering Science or School of Business and Management

Name of degree programme

Thesis supervisors

Templates of the title page and abstract are available in the Uni student portal (link in Instructions and Regulations in section 6).

4. Maturity test

The Master's degree requires a maturity test, which demonstrates the student's knowledge of the thesis topic. The abstract of the Master's thesis acts as the maturity test for the degree.

The primary supervisor of the thesis assesses the abstract on the scale pass/fail. If language of the maturity test in the Master's degree needs to be assessed, the primary supervisor of the thesis may decide to submit the maturity test to a language professional approved by the university. More detailed instructions are available in the Uni student portal (link in section 6).

5. Publication and assessment of a finished thesis

The university defines and announces the graduation schedule for each academic year. Instructions concerning the assessment of theses and on graduation schedules are available in the Uni portal.

Before the publication and assessment of the thesis, the student submits a finished manuscript to the primary supervisor and applies for permission to publish it. The school assesses the thesis upon the student's application. To apply for the assessment of their thesis, students:

- upload their thesis and abstracts to the LUTPub repository maintained by the LUT Academic Library after receiving permission to publish it. After the library processes the thesis, it will receive a URN.
- submit the assessment application (form 1B) including appendices to Student Services.

Forms, schedules, and additional information related to the publishing and assessment of final theses are available in the Uni student portal.

The supervisors prepare a written statement on the thesis and propose a grade. Students of degree programmes in English will be provided a statement in English on their Master's thesis. The title and grade of the thesis are shown in the degree certificate.

Schools define their own assessment criteria for Master's theses. Frequently applied criteria include e.g.

- the problem-setting, objectives, definitions and delimitations of the thesis
- the relationship to previous research
- the research approach, methods and material used in the work
- the schedule of the research and time management
- the results and their analysis
- the organisation and coherence of the work
- the profoundness of the work
- the reliability of the work
- the language and layout of the work
- an independent approach and application.

Master's theses in technology are assessed on the scale 0 fail, 1 passable (lowest passing grade), 2 satisfactory, 3 good, 4 very good and 5 excellent. Master's theses in business are assessed on the scale improbatum (fail), approbatum (lowest passing grade), lubenter approbatum, non sine laude approbatum, cum laude approbatum, magna cum laude approbatum, eximia cum laude approbatum and laudatur (highest grade). An approved thesis cannot be rewritten nor its grade raised.

If a student is not satisfied with the evaluation, he or she may lodge an appeal with the degree board within 14 days of the day the grade was made known. The written appeal must be addressed to the degree board and submitted to the university's Records Services. Students also have the right to find out why they were given the grade.

6. Links and online materials for thesis work

[LUT Academic Library](#)

- pages for students writing a thesis
- [LibGuides](#), a portal with instructions and information provided by the library

Uni student portal, Studies

- [Instructions and Regulations](#), “Final thesis instructions”
- [Forms](#) (e.g. forms 1A and 1B)

Turnitin guides

- [for students](#)
- [for supervisors](#)