

**REQUIREMENTS FOR PREPARATION OF FINAL
THESIS
IN UNDERGRADUATE INDUSTRIAL TECHNOLOGY
MANAGEMENT PROGRAMME**

Final Bachelor Thesis (FBT) is independently prepared thesis which summarises the knowledge, abilities, and skills acquired during the studies and serves as substantiation of the business management qualification awarded. In terms of content and analysis methods, FBT unite, both directly and indirectly, the subject matters of different academic subjects into a totality. The FBT should address topical problem of an industrial organisation, where the “problem” is understood as the pursuit of the strategic goal of the organisation.

FBT is prepared during the 8th semester of studies and grants 12 ECTS credits. Thesis must be prepared in English.

1. STRUCTURE OF FINAL BACHELOR THESES

FBT must be prepared in adherence to the APA bibliographical standard¹. The structure and scope of individual sections of Final Bachelor Theses is specified in Table No. 1 below.

Table No. 1. Structure and scope of Final Bachelor Theses

Section	Volume
Title page	1 page
Summary (in English)	1 page or 300 words
Table of contents	1–2 pages
List of figures	1–2 pages
List of tables	1–2 pages
Introduction	500–800 words
1. Analysis of situation	2500–4000 words
2. Empirical study	2500–4000 words
3. Managerial solutions	2500–4000 words
Conclusions	1–2 pages
Bibliography	1–5 pages
Total:	8 000–14 000 words
Annexes	Based on the needs

Summary. The purpose of the summary is to provide the key information about the final thesis: authorship, topic, objective, research methods, and results. For theses written in English, the summary is written in English only and follows right after the title page. Three to five keywords are specified after the summary. The summary may not exceed one page.

The author and the title of the final thesis are specified above the summary:

[Surname, given name], Enhancement of the project management system at “ABC Įranga”, UAB
[manuscript]: Final Bachelor Thesis. Management and business administration. Vilnius, ISM
University of Management and Economics, 2018.

¹ <http://www.apastyle.org/about-apa-style.aspx> (accessed 15 11 2017)

Table of contents. Table of contents of Final Bachelor Thesis must correspond to the structure of the thesis (see Table No. 1). The table of contents must contain all the sections as set by the requirements for the structure of FBT.

Titles of structural sections and their start page numbers must be specified in the table of contents. The table of contents must start with the 'Introduction' section and end with the 'Annexes' section. The titles of the sections (subsections) should reflect the contents of the section (subsection).

Introduction. The introduction should reflect the essence of the thesis and present the key results of the topic being analysed. The structure of the introduction must be as follows:

- Problem tackled;
- Topicality of the topic;
- Goal of the thesis;
- Objectives of the thesis;
- Research methods;
- Logical sequence of the thesis.

Problem of the thesis reflects the pursuit of the strategic goal of the organisation, leading to the improved process management of the organisation. The problem is formulated as the result of the situation analysis of the organisation. **Topicality** of the problem should be based upon the relevance of the underlying strategic goal. The problem is usually formulated as a statement or question, e. g. "In which way the process management should be improvement to increase the customer satisfaction?" Since the problem can be solved in many different ways, it should be split into the goals, corresponding to a particular way of solution. By assigning priorities, one of them should be chosen as the **goal** (topic) of the thesis. Next, this goal is broken down into the **objectives** of the thesis.

The introduction must specify what data collection and processing methods (observations, surveys, experiments, document analysis, statistical data analysis, modelling, case study, etc.) were used in the preparation of the thesis. At the end of the introduction, logical sequence of the work must be explained: main parts of the thesis named and described briefly, revealing interrelationship of the parts.

Situation analysis. The goal of the analysis of situation of the organisation is to formulate the problem and to choose the way of solving it. Therefore, analysis of the internal situation of the organisation together with the analysis of its external environment should be produced based upon relevant theoretical models, e. g. PESTEL, 5 forces, SWOT (TOWS), etc. For the internal analysis, processes must be classified according to the Porter's value chain (or similar classification tool) and process model on a high hierarchical level (metaprocess) of the organisation should be build. The section ends with the SWOT and TOWS analysis and, as a conclusion, with the formulation of the hierarchy of the goals of the thesis: Problem, Goal, and Objectives.

Empirical research. The empirical research requires collection of empirical data, which is necessary to achieve the goal of the thesis. The optimum scope of the empirical research must be defined in relation to available time, predefined by the allocated number of ECTS credits. Any unrealistic expansion outside the subject matter and objective of the empirical study must be avoided. Data that is collected and used for a FBT should be public or a student must be sure that data can be used for academic purposes (provided in FBT and presented during public defence). This section usually comprises the following two subsections: 1) description of the methods of the empirical research, and 2) process and results of the empirical research.

Research methodology. The description of methods of the empirical study should contain the objective and tasks of the empirical research (stages of the research); the choice of the method of the

research (quantitative or qualitative) must be substantiated; the choice of the data collection method (surveys, interviews, observations, document analysis, experiments, time study, etc.) must be explained; the study samples must be substantiated and the sampling procedure must be described; and the logic of preparation of the study instrument (questionnaires, observation sheets, document selection, etc.) must be described. The final part of this section must contain a description of the data analysis methods which it is planned to use. In other words, the description of study methods must reflect all the information, which would enable other researchers to repeat the study. Any important additional study information (collected data, sample questionnaires and observation protocols, sample documentation, audio and video recordings, etc.) must be provided as annexes to final thesis.

A standard structure of the section “Research methodology” may be as follows:

- Objective and tasks of the study;
- Theoretical foundations of the research
- Approach of the research and data collection method;
- Samples and sampling procedure;
- Explanation of the study instruments used;
- Data analysis methods.

Process and results of the empirical research. This section should contain description of the data collection process (including the problems encountered) and the model of the process analysed, i.e. the process map and relevant attributes of the process.

Students who use qualitative survey have to provide systemised script of interview in the annexes (“Questions-respondents” matrix is recommended).

Managerial solutions. The managerial solutions section must present specific process improvement proposals for solving the problem analysed, which must be specific and properly substantiated. The substantiation provided must be based on the relevant theoretical models and results of the empirical research.

Conclusions. This section must contain a list of the results of each of the sections of the final thesis. The conclusions must show that the author has reached the objectives and achieved the goal of the thesis. Not solved objectives (if there are such of them) must be listed also.

Bibliography. All literature sources quoted and/or referred in the thesis must be included into the bibliography. In contrary, sources which were not quoted and/or referred in the thesis itself must not be included in the bibliography. The bibliography of FBT is supposed to contain at least ten academic informational sources. Bibliography must comply to the APA standard.

Annexes. Annexes should include statistical, sociological, and legal information, internal company documents, and other examples of the data sources or data collection tools, like sample questionnaires and primary and secondary data tables used during research, systemized data of qualitative survey.

2. PREPARATION PROCESS OF FINAL BACHELOR THESIS

Preparation of Final Bachelor Theses is carried out in stages, at the end of each of which students report to their academic advisers on the work completed. A detailed time schedule of practical work and preparation of final theses with approved dates is provided in Annex 1. A detailed description of the preparation process of Final Bachelor Theses is provided in Table 2 below.

Table 2. Preparation process of Final Bachelor Thesis

Item No.	STAGE	COMMENTS
1.	Seminar on the concept of FBT and of applicable requirements	During the seminar, students are introduced to the practical work and preparation of FBT, defence procedure, assessment criteria, and fields of research and subject matters from which they may choose. Requirements for FBT are also presented.
2.	Choosing a field of research for Final Bachelor Theses	Students choose the desired research topic and subject matter from the proposed list and upload the completed questionnaire to the e-learning system.
3.	Assigning of academic advisers	Students are informed about the academic advisers assigned.
4.	Academic advisor consultation 1	Academic adviser assist student in the formulation of the preliminary problem and topic of the thesis and in the identification of the main objective of final thesis.
5.	Preparing the INTRODUCTION and of ANALYSIS OF SITUATION of FBT	Student prepares the analysis of situation (the first) section of final thesis. Data collected during the internship may be used.
6.	Submitting the INTRODUCTION and SITUATION ANALYSIS to academic advisers	Student submits electronic and/or thesis versions of their introduction and analysis of situation to their academic advisers.
7.	Academic adviser consultation 2	Academic adviser indicates any shortcomings of the situation analysis and helps the student to formulate the objective of the empirical study and choose appropriate research methods.
8.	Presenting FBT topics at a seminar and defence of the topics	The seminar is held to hear the student's 5-minute presentation on the problem, goal and objectives of the thesis. The seminar is attended by the head of the field of research, academic advisers, and students.
9.	Approval by the Study Committee	The Study Committee takes decisions on whether the problem and the topic are appropriate for final thesis. Student is informed about approved final thesis topics.
10.	Repeated defence of the topic	If the topic was not approved, the student is invited to present his/her topic once again. If a topic is not approved again, the Study Committee takes a decision concerning further preparation of the relevant thesis.
11.	Research adviser consultation 1	Research advisers, based on the consultation schedule, provide consultations concerning research methods and research progress to registered students.
12.	Research adviser consultation 2	Research advisers, based on the consultation schedule, provide consultations concerning interpretation of research results to registered students.
13.	Performing an empirical research, preparing the description	Student performs the empirical research, i.e. collect, analyse and interpret empirical data.
14.	Submitting the section EMPIRICAL RESEARCH to academic advisers	Student submits an electronic or printed version of the section of empirical research to the academic adviser.
15.	Academic adviser consultation 3	Academic adviser indicates any shortcomings of the empirical research and advise the student on managerial solutions.
16.	Preparing the MANAGERIAL DECISIONS and CONCLUSIONS	Student briefly describes the theoretical models used to make the managerial decisions, and prepares specific suggestions for solving the problem of the thesis.
17.	Submitting the MANAGEMENT DECISIONS and CONCLUSIONS to academic adviser	Student submits present electronic or printed version of managerial decisions to the academic adviser.

18.	Academic adviser consultation 4	Academic adviser specifies any shortcomings of the FBT.
19.	Submitting the definitive version of FBT to academic advisor	Student submits the definitive version of FBT in electronic or printed format to the academic adviser.
20.	Preparing the review of FBT	Academic adviser prepares the review of FBT in a written form. Electronic versions of the review is sent to the head of the research field.
21.	Submitting the FBT to the studies department	Electronic version of a thesis, named as Surname_Name_VD_2012 is uploaded onto e-learning system in assigned folder. Two printed and stitched copies of final theses, signed by the author, are presented to the studies department. Thesis should be uploaded onto e-learning system in advance to the submission of printed version. On submission of the thesis to the Study Department, students also submit signed author's declaration (Annex No. 2).
22.	Peer review seminar	It is advisable for the students to hold an independent seminar.
23.	External review of final theses	External reviewers prepare their written reviews on the thesis.
24.	Approval by the Study Committee	A meeting of the Study Committee is held, where the decision on the suitability of final thesis for the defence is taken.
25.	Defence of FBT	Defence of FBT is held according to the schedule prepared by the Study Department.

2.1. Choosing a research field. The initial stage of the preparation of final theses involves the choice of a research field and subject matter. At this stage, student must choose only a field of research, which will be later elaborated with the help of the academic adviser. Later, the student will also adjust the problem to and formulate the topic of the thesis. There are two research fields, namely, project management and process management. Subject matter in the field of project management is improvement of project management system of an industrial organisation; while in the field of the process management the subject matter is improvement of management of selected processes in an industrial organisation.

2.2. Formulation and approval of a topic. As a result of the analysis of situation of an industrial organisation, a set of strategic initiatives is revealed, one of which becomes the problem of the organisation. This problem is then split into possible ways of solving, one of which with the highest priority must be chosen as the topic or goal of the thesis. Finally, the goal is split into objectives of the thesis.

The final wording of the problem, topic and objectives is determined during the seminar, where the student makes a 5-minute presentation on this matter. The goal of the seminar is to convince the participants (head of the research field, academic adviser, and other students) that the goal and scope of work is clear for the student and conforms to the requirements of the FBT.

Participation of the student in the seminars is obligatory, except the case where the student has his internship abroad with a permission of the vice-rector for studies and research. Only topics presented on the seminar are forwarded to the Study Committee for approval.

A standard structure of the presentation may be as follows:

- Formulation of the topic;
- Description and topicality of the problem
- Goal and objectives of the thesis
- Methodology of the empirical research
- Main literature.

If a topic is not approved by the Study Committee, student is granted an additional week to eliminate any shortcomings and prepare a repeat talk. List of the students who are allowed to continue preparation of their FBT as well as names of academic advisers are published.

2.3. Presentation of FBT to the Studies Department. Students deliver electronic versions of the theses on e-learning system. The deadline for delivery of final theses is specified in the FBT preparation time schedule.

3. DEFENCE OF FINAL BACHELOR THESIS. Final Bachelor Thesis that is qualified as an appropriate for the defence by Study Committee, must be defended publicly in a defence session of qualification board. At the beginning of the session, the chairperson of qualification board invites a candidate to make a presentation of his/her thesis, reads the title of the thesis aloud, introduces the academic adviser, and specifies when the author of the thesis can begin his/her speech.

The author of the final thesis makes a short presentation (up to 10 minutes) of the thesis.

The academic adviser makes short comments afterwards. If the academic adviser is unable to attend the meeting, then the review of the academic adviser is read aloud by the secretary of the qualification board. The external reviewer speaks afterwards. If the external reviewer is not present, the review is read aloud by the secretary of the qualification board. The author of the thesis then answers any comments or questions presented by the external reviewer.

Members of the qualification board and other parties attending the meeting may ask questions to the author.

Before the defence, the final bachelor thesis is evaluated by the thesis supervisor and a reviewer. The suitability of FBT for defence is discussed in the meeting of a Study Committee.

By decision of the Study Committee, following the approval of by the vice-rector for studies and research, students may be denied the opportunity to defend a final thesis, if **at least one** of the following may be applied to the thesis or its preparation process:

1. Study Committee has not approved the topic of the thesis;
2. The student has failed to adhere to the approved thesis preparation deadlines including the deadlines of submitting separate part of thesis;
3. Supervisor's evaluation is negative;
4. Reviewer's evaluation is negative;
5. The student has violated academic ethics;
6. Work does not follow formal requirements for bachelor thesis (structure; volume; research data not provided in appendixes; etc.).

Student who fails to submit to the Study Department his/her final bachelor thesis on time is unconditionally not qualified for the defence.

