#### LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES

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### STUDY COUNCIL DECISION Jelgava

26 October 2016 No. 2.4.-13/8

On the regulations for the technical formatting of the scientific work to be submitted to the promotion council

After listening to the report of the head of the Study Centre, Sandra Sproge,

#### The study council decides:

to approve the regulations for the technical formatting of the scientific work to be submitted to the promotion council

Chairperson of the study council A. Laizāns

Secretary of the study council L. Šeļikova

## REGULATIONS FOR THE TECHNICAL FORMATTING OF THE SCIENTIFIC WORK TO BE SUBMITTED TO THE PROMOTION COUNCIL

The doctoral thesis is a compilation of the results of original empirical or theoretical scientific research, which provides new insights into the research problem, deepening the content and expanding the scope of scientific and practical information in the field.

#### A doctoral thesis can be:

- a dissertation in which the author has justified the choice of the topic, defined the aim and tasks of the research, described the scientific achievements in the research of the topic and the methods used, presented and discussed the results and findings, summarising them in conclusions and thesis to be defended;
- a thematically unified collection of scientific publications. Publications must be published or approved for publication in scientific periodicals which are peer reviewed anonymously, are available internationally in repositories of scientific information and are cited in internationally available databases;
- a monograph a peer-reviewed scientific book dedicated to one topic, available internationally in repositories of scientific information, contains a bibliography and a summary in a foreign language.

The doctoral thesis and its summary are formatted in accordance with the generally accepted requirements for the arrangement of scientific reports, journals, collections of articles, monographs, paying equal attention to the recording of text, tables, pictures, formulas, and bibliographic lists of information sources. They need to be thoughtfully designed and applied. The promotion council has the right to set additional requirements for the formatting of the doctoral thesis and summary not later than 6 months before the submission of the doctoral thesis.

#### 1. General requirements

- 1.1. The desired volume of the doctoral thesis, excluding the list of used information sources and appendices, does not exceed 150 pages.
- 1.2. The thesis is written in Latvian or, in coordination with the promotion council, in one of the official languages of the European Union, accompanied by a translation of the summary of the doctoral thesis into the official language. According to the mutual agreement between the author of the doctoral thesis and the promotion council, the public defence may take place in the official language or in one of the official languages of the European Union.
- 1.3. Thesis content: title page (see Appendix 1), general information about the publication, annotation (in Latvian, English and, in coordination with the promotion council, in one of the official languages of the European Union), content, lists of tables and figures, symbols and abbreviations used in the thesis, introduction, which includes the problem statement, goals, tasks, expected benefits, contribution to the development of the field, review of information (literature) on the research problem, developed or applied theoretical model, materials and methods, processing of results, analysis, observations, conclusions and proposals for further research, list of information sources, annexes, if any.

1.4. The prepared doctoral thesis is bound in hard covers and an electronic copy of the thesis is created in *pdf* format. The summary of publications is formatted as a separate A4 size hardcover with a title page, without inserting blank pages between individual publications.

#### 2. Text

- 2.1. The doctoral thesis must be typed on A4 format sheets of white paper, printed on one side with 20 mm margins from the top, bottom and right edges of the page, and 30 mm from the left edge. Use the *Times New Roman* font, aligning the text on both sides, with a 1 cm indent between paragraphs to the left of the text. Character size 12 points, footnotes 10 points, line spacing single line. The pages are numbered at the bottom right of the page with Arabic numerals. The title page, annotations and table of contents are not numbered, but are included in the total volume of the work.
- 2.2. The text is divided into chapters and sub-chapters (at a maximum of three levels) in the order in which they are numbered. Chapters are numbered in Arabic numerals, followed by a full stop. Sub-chapters are numbered within the relevant chapter in two Arabic numerals, for example: 1.1., 1.2., etc. Annotations, introduction, content, conclusions and bibliographic list of sources are not numbered.
- 2.3. Each chapter starts on a new page. The titles (headings) of the chapters are written in capital letters (*Bold*), the titles of the sub-chapters are written in bold lowercase letters with an initial capital letter. Letter size of chapter headlines 14 points, for sub-chapters 12 points. Headings are centred without division of words into syllables, using underscores or periods. For headings and subheadings, the line spacing is 1 line. There should be single line spacing between the headings, subheadings and the text (i.e. if the font size of the main text is 12 pt, this interval is also 12 pt), there should be two spaces between the text and the next subheading. Tables, figures and formulas are placed in the text after the paragraph in which they are referenced.
- 2.4. A numbered list or bulleted list is used to create structured text. The recommended designation of list items are as follows: a number in parentheses, a letter in parentheses, a bullet. It is recommended not to use paragraphs marked with the symbol on several levels to structure the text, it is not allowed to use the same symbol on several levels.
- 2.5. Bold, italics, underlining, etc. should be used to highlight certain elements of the text, only such highlights should be used consistently throughout the text, i.e. the same type of highlighting should be used for the same type of information, such as words in Latin or in another foreign language, in italics.

#### 3. Tables

- 3.1. It is recommended to create tables in *MS Word* or *MS Excel*. The tables in the work are numbered within each chapter, using double numbering with Arabic numerals (chapter number and table sequence number). The table number is written on the right side of the page above the heading or in a single row with the heading if the list of tables is generated automatically using a body text font. There must be single line spacing between the text and the table number, as well as between the heading and the table itself.
- 3.2. The heading of the tables should be centred, in bold, without punctuation at the end of the heading. The table title, along with the column names, should answer the questions:

- 3.3. In tables, the font size of the body text must be used. All cells in the table must be filled in, a dash in the empty cells. Characters must be the same size throughout the table; characters larger than 1 point may be used in large tables. Decimal point period.
- 3.4. The table shall consist of at least three columns and three rows for quantitative data and at least two columns and two rows for qualitative data. Diagonal stripes in the table are not allowed. Table line thickness 1/2 or 1/4, background tonality is not used. If the information in the table has been borrowed, reference should be made to the relevant data source.

#### 4. Images

- 4.1. One term, "image" is used to denote illustrations, drawings, graphics, etc. in the work.
- 4.2. The images are numbered within each chapter, using double numbering with Arabic numerals (chapter number and table sequence number), for example, Image 1.2. Title of the image. The image number and heading are written below the centre of the image, the font size is 12 points, in bold, without a period at the end of the heading. Image titles should answer the questions: What? Where? When? If decipherment of the symbols used in the figure is required or other essential explanation is required, it shall be written below the title in the centre or on the left with a character size of 10 points.
- 4.3. In images, the font and size of the body text must be used. Avoid using background tinting and framing lines in the images. Avoid captions on the images, instead use numbers and symbols that are deciphered in the explanation of the image.
- 4.4. Scanned images, digital photos and drawings can be created and/or processed in any graphic application and inserted into *MS Word* as images. It is recommended to create charts in *MS Excel*. If the information included in the images has been borrowed, reference should be made to the relevant data source.

#### 5. Formulas and units of measurement

- 5.1. The formula text should be placed in a separate line in the centre. Use *MS Equation* or another formula preparation program.
- 5.2. The formulas are numbered with Arabic numerals within the chapters, the numbers are written in parentheses opposite the formula on the right side of the page. If the formula occupies several lines, the number is written to the right of the last line.
- 5.3. The size of the letters, numbers and symbols in the formulas is 12 points. Explanations of the symbols used in the formula are written below the formula, each in its own line. A hyphen is placed between the symbol and the explanation, after the explanatory point, comma, unit and semicolon, after the last symbol, decipherment point.

5.4. The basic units of measurement and derived units of measurement of the International System of Units SI in accordance with the Cabinet Regulation No. 1186 of 29 October 2013 "Regulations on Units of Measurement" must be used in the work. Abbreviated designations for units of measurement are used after the numerical values of the size, in the column headings and in the explanations to the formulas. In abbreviated designations, a full stop is not used as an abbreviation. The designations of all composite units shall be written in one line, using a negative notation, for example: ms<sup>-1</sup>, kg m<sup>-1</sup>. Derived units must use the same spelling – abbreviations or full names.

#### 6. Bibliographic list of information sources

- 6.1. The bibliographic description of the information sources and the references given in the text are created while maintaining uniformity throughout the work. References in the text should be consistent with the sources listed in the list of sources of information and should be publicly available. The text of the doctoral thesis must contain references to all sources of information listed.
- 6.2. When preparing a bibliographic list of information sources used in the doctoral thesis and references to these sources, it is allowed to use automatic reference management tools, such as *Mendeley*, *EndNote*, *Zotero* or the like and the formatting style of *American Psychological Association* (APA) 6th Edition. If necessary, another well-known information source formatting style can be used, but writing of sources without a certain structure or a mixture of different styles is not allowed.
- 6.3. The sources of information shall be described in the original language and arranged in alphabetical order. The sources are written first in Latin languages and then in Cyrillic. Sources of information must be numbered.
- 6.4. References to sources of information are given in brackets, indicating the name of the author or the name of the source of information and the year of publication. If there are more than three authors, then when making a reference, write only the first and add et al. If the authors of the information are not indicated, write its name and, if it is long, only a few words and dots. If several sources of information are referred to at the same time, a semicolon is placed between them.

#### 7. Appendixes

- 7.1. An appendix can be added to the doctoral thesis questionnaires, extensive analytical calculations, voluminous tables, technical data, drawings, etc., if there are references to them in the main work. The numbering in the appendixes starts with the first appendix, the title page of the appendixes is not numbered.
- 7.2. Each appendix starts with a new page with its serial number. The number of pages in the appendix is not included in the scope of the work. Appendixes do not include previously published materials, such as regulations, etc.

The summary of the doctoral thesis must be prepared in Latvian and, in coordination with the promotion council, in one of the official languages of the European Union with a recommended total volume of up to 50 pages (in each of the languages). The formatting of the summary is analogous to the doctoral thesis, with the following exceptions:

1. The summary is formatted as A5 size paper sheets in printed form in Latvian and in a foreign language as one brochure. An electronic copy of the work is created in *.pdf* format. Indents from the edges of the page: 20 mm from the left, 15 mm from the top, bottom and right of the page.

- 2. The summary shall include:
  - title page (see Appendix 2);
  - general information (indicate the place of development and approbation of the doctoral thesis, time period, name, surname, position, scientific degree and institution of the supervisor(s) of the doctoral thesis, consultants and official reviewers, time and place of defence of the doctoral thesis);
  - summary table of contents;
  - introduction (describes the problems and structure of the scientific work, the aim and direction of the research, scientific novelty and personal contribution of the author, approbation of the work and realisation of the results. Upon the decision of the promotion council, other information related to the personality of the candidate for the doctoral thesis and his/her research or academic activities may also be added to the summary;
  - a concise presentation of the doctoral thesis (topicality of the research, approbation of the scientific work, materials and methods, research results);
  - the main conclusions and proposals;
  - the sources of information used in the doctoral thesis, if it is determined by the promotion council.
- 3. The size of the characters of headings in the summary is 12 points, in the main text 10 points, in tables and figures 9 points. The headings of chapters and sub-chapters, the titles of the images and their explanatory text, the titles of the tables and textual information, the explanations of the formulas must be in two languages. The summary does not include lists of tables, figures and formulas.

#### Preparation of the doctoral thesis for unified computer plagiarism control:

- all parts of the work (title page, annotations/reports, table of contents, introduction, main text with pictures and tables, conclusions and suggestions, list of information sources and appendixes) must be included in one file in *.pdf* format;
- the file must be saved with a name consisting of the doctoral student's surname, first name and matriculation number; the name of the file must use the letters of the Latin alphabet and must not contain diacritical marks (hyphens, lengthening marks, etc.);
- the file must not be password protected (locked) and the file must not be a scanned text image;
- conversion watermarks and ad text may not appear on files converted to .pdf, size of the file up to 50 MB.
- the file shall be submitted for plagiarism control in the unified computerised plagiarism control system.

In cases when due to the specifics of the thesis, deviations from these regulations for the formatting and arrangement of the doctoral thesis and/or summary are required, they must be agreed on in advance with the chief specialist of the LLU in co-operation with the decision-making institutions.

# Latvia University of Life Sciences and Technologies XXXXX faculty

#### XXXXX institute/department



#### Name, Surname

#### **Doctoral thesis**

## TITLE OF THE DOCTORAL THESIS IN LATVIAN TITLE OF THE DOCTORAL THESIS IN ENGLISH

Doctoral degree Doctor of Science (Ph.D.)

#### XXXXX field

Supervisor of the doctoral thesis position, <b>Dr. xxx. or PhD</b> , Name, Surname	
Doctoral thesis consultant (if any) Position, <b>Dr. xxx. or PhD,</b> Name, Surname	
Author of the doctoral thesis	

Jelgava

# Latvia University of Life Sciences and Technologies XXXXX faculty

XXXXX institute/department



#### Name, Surname

### TITLE OF THE DOCTORAL THESIS IN LATVIAN TITLE OF THE DOCTORAL THESIS IN ENGLISH

Promocijas darba KOPSAVILKUMS

Zinātnes doktora grāda (Ph.D.) iegūšanai

#### **SUMMARY**

of the Doctoral thesis for the Doctoral degree of Science (Ph.D.)

Jelgava