

## GUIDELINES FOR WRITING DIPLOMA THESES

**GUIDELINES constitute supplementary material for students who prepare their diploma thesis at the Department of Construction Management (L-7).**

*The legal basis regulating the diploma process at Cracow University of Technology: Regulations of higher education at Cracow University of Technology*

**All information helpful in the diploma process at the Department of Construction Management (L-7) can be found at: [www.L7.pk.edu.pl](http://www.L7.pk.edu.pl) in the "For students" tab.**

### The role of the supervisor

**The diploma thesis is the student's own work.** The supervisor supervises the substantive side of the work. His/Her role is not to check spelling, grammatical or stylistic errors. Before the thesis is checked by the supervisor, the graduate should ensure the correctness of his work in this area.

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### 1. TITLE PAGE

The cover page template can be found on the website [www.L7.pk.edu.pl](http://www.L7.pk.edu.pl) in the "For students" - "Defense of diploma theses" tab. On the title page, the Polish and English versions of the title of the thesis should be entered. The title of the work should be entered without a full stop at the end.

Example:

TECHNICAL AND COST ANALYSIS OF SELECTED THERMAL INSULATION MATERIALS  
IN HOUSING CONSTRUCTION

### 2. WORK FORMATTING

The work should be formatted as follows:

- number of pages:  
Engineering Thesis - 40 - 60 pages, Master's Thesis about 60 - 80 pages,
- margins: top, bottom, right - 25 mm, left - 35 mm,

- font: Times New Roman 12 points,
- line spacing 1.5 points,
- text aligned to the right and left margins (justified),
- the pages of the thesis should be numbered, however the first page where the number occurs is on the page with the table of contents. This is a sequential number (e.g. 3), assuming the title page is number 1.

### **3. WORK STYLE**

- Style of thesis - The text should be written in an impersonal form or in a third person, e.g. "*calculations were made using the program ...*" or "*The author performed the calculations using the program ...*"
- Individual parts of the text, paragraphs, consisting of one or more sentences constituting a whole content (thought), should be preceded by an indentation.
- Important parts of the text or even individual words can be bolded to draw the reader's attention to them.

### **4. WORK LAYOUT**

The diploma thesis should have the following elements (unless it is an engineering project):

- Table of contents
- Introduction
- Work development (chapters and subsections)
- Conclusion
- References (bibliography)
- Lists of tables, figures, attachments

#### **4.1 Table of contents**

The title page is considered to be the first. The subsequent page should be used for the table of contents (e.g. 3). The table of contents should be clear and communicative. Provide the page numbers on which the individual parts of the text are included in the list (introduction, chapters and subsections sequentially numbered, ending, literature, list of figures, list of tables).

In the table of contents, the subsections must be numbered (1.1 .; 1.2 .; 1.1.1.). It is recommended to use the multilevel numbering up to level three (subordinate to level 2), that is, for example, "1.1.1."

The "Introduction" and "Conclusion" are not numbered.

*Example:*

<i>Introduction .....</i>	<i>3</i>
<i>1. Basic organizational structures of construction projects and processes ... ..</i>	<i>5</i>
<i>1.1. Projects type .....</i>	<i>7</i>
<i>1.1.1. Method 1.....</i>	<i>9</i>
<i>1.1.2. Method 2.....</i>	<i>13</i>
<i>1.1.3. Method 3.....</i>	<i>15</i>
<i>1.2. Projects implemented with the use of flow methods of work organization .....</i>	<i>17</i>
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List of tables .....	55
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#### **4.2 Introduction**

After the table of contents, provide a short introduction including:

- introduction to the topic and justification for taking it up,
- goals of thesis,
- operating range
- methods of achieving goals

Introduction volume - no more than 2 pages. Introduction is not numbered.

#### **4.3 Chapters and subchapters**

- The work should be divided into chapters and sub-chapters.
- All main chapters must start on a new page.
- Subsections must be numbered (1.1 .; 1.2 .; 1.1.1.); use the multilevel numbering up to level three (subordinate to level 2), that is, for example, "1.1.1."
- Avoid separating individual subsections from chapters, e.g. chapter 3 with only one subsection - 3.1. In such a situation, the subsection or its numbering should be abandoned.
- All chapters should be sufficiently long (a chapter cannot be half a page).
- The work should be developed relatively evenly - all chapters should have more or less the same volume.
- Titles of chapters and subsections should be written without punctuation marks, i.e. without a full stop or colon at the end.

#### **4.4 Conclusion**

The Conclusion of the work, as well as the Introduction, should be short, no more than two pages. In Conclusion, you should: give conclusions resulting from the work, pay attention to your own contribution, point out what is original in the work. New content not previously discussed in the work should not appear in the Conclusion. The Conclusion is not numbered.

## 5. REFERENCES IN THE TEXT

In diploma theses, references are made to sources that contain information used by the author in the work, e.g. tables, drawings, figures.

### 5.1 Types of references

- Relevant, explanatory, commenting on fragments of the text, scientific terms

*Example:*

<sup>2</sup> *the mortgage is a limited property right*

- Dictionary, i.e. specifying the meaning of foreign-language, specialist terms

*Example:*

*PR – Public Relations*

- Bibliographic - descriptions of documents from which information and citations come from

*Example:*

*Kozik R. (et al.): Accuracy of preliminary estimates of the zero state costs of a cubature facility, Archives of the Institute of Civil Engineering – Poznań University of Technology, Vol. 13/2012, p. 201-207*

Bibliographic type of reference is rarely used today. Most often, bibliographic references are used by indicating the number of the bibliographic item from the list of bibliographies (as indicated in point 5.2).

### 5.2 Bibliographic type of reference in text

In the case of diploma theses, references are most often applied according to the rules described below.

**Method 1** – In square brackets there is a number that refers to the relevant item of literature in the list of references at the end of the work.

*Example:*

*Individual variants can be described as functions [34]*

In the case of multiple items:

*Example:*

*Individual variants can be defined as functions [34], [35], [78] or [34,35,78]*

**Method 2** – The surname (s) of the authors and the year of publication are given in brackets.

*Example:*

*Individual variants can be described as functions ... .. [Smith, 2000]*

In the case of multiple items:

*Example:*

*Particular variants can be defined as functions ... .. [Smith, 2000], [Novak, 2011] or [Smith, 2000; Novak, 2011]*

In the case of several authors:

*Individual variants can be described as functions ..... [Smith, et al. 2000]*

## 6. ABBREVIATIONS IN THE TEXT

The abbreviations must be explained on first use. After that, abbreviations can be used in the content of the work instead of full names.

- There is no need to explain popular abbreviations *e.g. m<sup>2</sup>, kg*
- The others must be clearly explained *e.g. PPO – Public Procurement Office*

## 7. TABLES, FIGURES, PHOTOGRAPHS

Tables, figures and pictures should be placed centrally at work.

All figures, pictures and tables included in the work must be recalled in the work, introduced before they are inserted.

*Example:*

*"Figure 1.1. presents ... "*

*"Labor costs account for 30% of the total costs (Table 1.1.)"*

Figures, photos and tables should not be mentioned by using the word "below" without giving the figures/table number, for example, "The table with test results is presented below". Always provide the number of the table, drawing, etc.

### 7.1 Tables

When recalling a table in the text, you can use both the full name and the abbreviation and give the table number, e.g. (Tab. 2.3) or (Table 2.3.). Table 2.3. denotes the third table in the second chapter. Above the table, the table number and title are provided. Below the table, the source material from which the table was borrowed is given, giving full information about the source material (according to the rules provided in chapter 9 on References) or by indicating the item number from the list at the end of the diploma thesis (bibliography). If the table is prepared by the author of the work, the source should be called "own study". The lack of such a formulation as well as the lack of indication of the source material means that the table is the author's own work of the thesis. Tables and descriptions should be centered. The table must be legible and fit within the text, in the case of large tables, use a horizontal page orientation.

*Example:*

Table 2.3. Determining material outlays

lp				

Source: Plebankiewicz E.: Podstawy kosztorysowania robót budowlanych, Politechnika Krakowska 1, Kraków, 2007, s.44

OR

Table 2.3. Determining material outlays

lp				

Source: Own study based on [2]

## 7.2 Figures

Each figure should be described. Within the text use the word "Figure" and give it a number. For example, "in Figure 2.3. presented...". In the case of figures, the number of the figure, description and indication of the source material should be written under the drawing (according to the rules provided in chapter 9 on references or by indicating the item number from the list at the end of the diploma thesis (bibliography)). If the figure is prepared by the author of the work, the source should be "own study". The lack of such a formulation as well as the lack of indication of the source material means that the figure is the author's own work of the thesis. Figures and descriptions should be centered. The figure must be legible and within the bounds of the text, in the case of large, wide figures, the horizontal page orientation should be used.

*Example:*

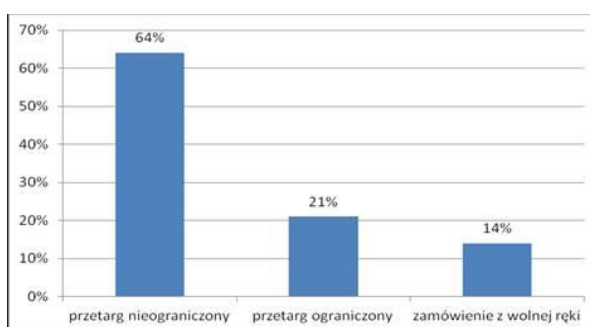


Figure 1.1. Share of individual public procurement procedures in the total number of procedures.

Source: Own Study

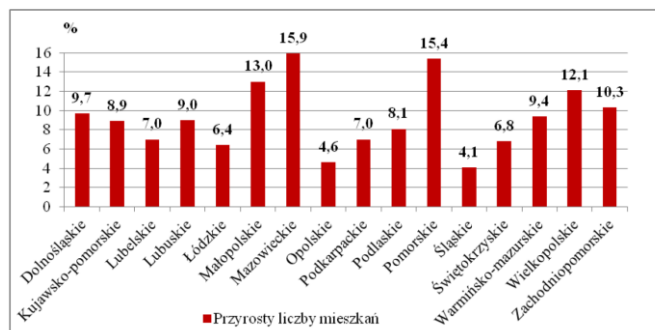


Figure 1.1. Increase in the number of flats compared to the previous register (in %) [5]

## 7.3 Photos

For photographs the word "Photo" is used, followed by the number (in the same way as in the case of the description of the figures and tables). The rules for recalling and describing a photograph are the same as in the case of describing the figures.



Photo 3.1. Main square in Krakow

Source: [http://www.krakow4u.pl/Rynek\\_Glowny\\_w\\_Krakowie.html](http://www.krakow4u.pl/Rynek_Glowny_w_Krakowie.html) (22.01.2014)

## 8. FORMULAS

If there are formulas in the work, use the equation editor to enter them.

The formulas are numbered as one sequence throughout the whole thesis and the number is placed on the right side of the margin. An explanation of the symbols included in the formula should be provided under the formula. The number of the source material from which the model was taken is also given.

*Example:*

The land use factor is determined by the formula [2]:

$$I = \frac{P_z}{P_t} \quad (1)$$

where:

I – land use factor,

$P_z$  – building area,

$P_t$  – gross area of land (building lot area).

## 9. LIST OF REFERENCES

- If the author of the work repeatedly referred to a given position in the work, it should appear only once in the literature list.
- The list of literature used by the Author while writing the work may be prepared in **alphabetical order**, according to the names of the authors of each item or according to the **order in which the items are cited in the work**.
- The numbering of the literature items is placed in square brackets.
- Methods of writing bibliographic entries in the "References" - The use of references depends on the type of source and the number of authors
  - ✓ When there are one, two or three authors, all are listed
  - ✓ When there are at least four authors - provide the surname and first letter of the first author's name with the note (et al.)
  - ✓ When the work is collective - the first element is the title and then the first letter of the name of the editor of the entire collection with a note (ed.)

**9.1 Journal articles** – surname, first letter of the author's name (s): title of the article, name of the journal, issue number, year of publication, page numbers on which the article is published

### One author

*Example:*

[2] Thompson C.W, Landscape and Urban Planning 60, 2002, pp. 59–72

### Two or three authors, all are listed

*Example:*

[1] Plebankiewicz E, Zima K, Wieczorek D, Life Cycle Cost Modelling of Buildings with Consideration of the Risk, Archives of Civil Engineering, Vol. 62, Issue2, 2016, pp. 149-166.

**When there are at least four authors** – provide the surname and first letter of the first author's name with the note (et al.)

*Example:*

*Kozik R. (et al.): Accuracy of preliminary estimates of the zero state costs of a cubature facility, Archives of the Institute of Civil Engineering – Poznań University of Technology, Vol. 13/2012, pp. 201-207*

### **9.1 Books, monographs, etc .:**

Surname and first letter of the author's name (s): title and subtitle, volume number, publisher, place of publication, year of publication.

*Example:*

Oxley R., Poskitt J.,: Management techniques applied to the construction industry, Fourt Edition, BSP Professional Books, Oxford, 1992

When the work is collective (many authors) - the first element is the title and then the first letter of the name of the editor of the entire collection with a note (ed.)

*Example:*

*Research methods and models in the engineering of construction projects, Kapliński O. (ed), PAN, Warszawa, 2007, s. 30*

### **9.2 Web Pages**

In the case of accessing websites, the website address and the date of accessing the website should be provided.

*Example:*

[http://www.krakow4u.pl/Rynek\\_Glowny\\_w\\_Krakowie.html](http://www.krakow4u.pl/Rynek_Glowny_w_Krakowie.html) (22.01.2022)

*Example:*

Korytárová J., Hanák T., Kozik R., Radziszewska-Zielina E. (2015). Exploring the contractors' qualification process in public works contracts, *Procedia Engineering* Vol. 123, p. 276-283: 4th Creative Construction Conference 2015 (CCC2015), Krakow, Poland, 21-24.06.2015  
<http://www.sciencedirect.com/science/article/pii/S1877705815031914>. (accessed: 12.12.2021)

### **9.3 Legal acts**

Legal acts are referred to by the name of the act, regulation, date of approval, number of the Journal of Laws (or other publishers) where it was published and the number of the item in the Journal of Laws.

*Example:*

Act of 6 December 2006 on the principles of development policy (Journal of Laws of 2009 No. 277, Item 1658)



## 9.4 List of References - Example

### List of References

- [1] Plebankiewicz E., Zima K., Wieczorek D.: Life Cycle Cost Modelling of Buildings with Consideration of the Risk, *Archives of Civil Engineering*, Vol. 62, Issue2, 2016, pp. 149-166.
- [2] Benedict M., McMahon E., *Green Infrastructure: Linking Landscapes and Communities*. Washington, D.C.: Island Press 2006
- [3] Oxley R., Poskitt J.: Management techniques applied to the construction industry, Fourth Edition, BSP Professional Books, Oxford, 1992
- [4] Thompson C.W, *Landscape and Urban Planning* 60, 2002, pp. 59–72
- [5] Korytářová J., Hanák T., Kozik R., Radziszewska-Zielina E. (2015). Exploring the contractors' qualification process in public works contracts, *Procedia Engineering* Vol. 123, p. 276-283: 4th Creative Construction Conference 2015 (CCC2015), Krakow, Poland, 21-24.06.2015 <http://www.sciencedirect.com/science/article/pii/S1877705815031914>. (accessed: 12.12.2021)
- [6] G. Bennet, *Integrating Biodiversity Conservation and Sustainable Use: Lessons Learned From Ecological Networks*, Gland/Cambridge, IUCN, 2004
- [7] J. Ahern, *Landscape and Urban Planning*, Special Greenways Issue, 33, 1995, 131-155
- [8] [www.naturalengland.org.uk](http://www.naturalengland.org.uk) (accessed April 26, 2016)
- [9] Public Procurement Office, <https://www.uzp.gov.pl/baza-wiedzy/zrownowazone-zamowienia-publiczne/zielone-zamowienia/wprowadzenie> (date of accessed: 2017-02-11)
- [10] The Act of 8 March 1990 on the Local Government, *Journal of Laws* of 2001 No. 142 Item 1591, as amended)

## 10 LIST OF TABLES AND FIGURES

The list of tables and figures is placed in the order of their listing in the content of the work. The list includes: the number of the table or drawing, its title and the page of the work on which it is located or begins.

Example:

1.1 Cost effect on profit .....	12
1.2 Process of 1m <sup>2</sup> of flats in different voivodships .....	45

## 11 ATTACHMENTS

- Attachments are numbered in the upper right corner – e.g. Attachment 5
- In the list of attachments at the end of the thesis, their number and name are given

Example:

1. The building permit decision template.
2. Statement on the right to use the real estate for construction purposes.