 <p>СӘТБАЕВ УНИВЕРСИТЕТІ</p>	<p><b>NON-PROFIT JOINT STOCK COMPANY “KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY NAMED AFTER K.I. SATBAYEV”</b></p>	
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General requirements for constructing, presenting, designing and the content of textual and graphic material	Edition #3 dated April «20» 2023.	ST KazNRTU – 09 – 2023

**ORGANIZATION STANDARD**

**QUALITY MANAGEMENT SYSTEM**

**EDUCATIONAL WORKS**

**GENERAL REQUIREMENTS FOR CONSTRUCTING, PRESENTING,  
DESIGNING AND THE CONTENT OF TEXTUAL AND GRAPHIC  
MATERIAL**

**ST KazNRTU – 09 – 2023**

**Official edition**

**Non-Profit Joint Stock Company “Kazakh National Research Technical  
University  
named after K.I. Satbayev”**

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## Preface

**1 DEVELOPED AND INTRODUCED** by the working group under Order # 14-O dated 09.03.2023. at NPJSC "Kazakh National Research Technical University named after K.I. Satbayev":

**2 APPROVED AND ENACTED** by Board Chairman - Rector of NPJSC "Kazakh National Research Technical University named after K.I. Satbayev" on April 20, 2023, # 173-D

3 Standard of the organization corresponds to ST RK 1.5 – 2019 RK SSTR. "General requirements for constructing, presenting, designing and the content of standards", ST RK 1.2 – 2021 SSTR RK. Procedure for developing the state standards and standards of the organization, IS ISO 9000 series.

**4 INTRODUCED** instead of # 2 edition dated 25.05.2017.

**5 TERM OF THE FIRST CHECK  
FREQUENCY OF VERIFICATION**

2028  
5 years

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## **ORGANIZATION STANDARD**

### **QUALITY MANAGEMENT SYSTEM EDUCATIONAL WORKS**

#### **General requirements for constructing, presenting, designing and the content of textual and graphic material**

**Date of introduction 20.04.2023**

#### **1 Field of application**

The given standard of the organization applies to all types of educational work performed in the process of teaching the students at University, and establishes general requirements for the design and content of textual and graphic material.

The requirements of this standard are mandatory.

#### **2 Regulatory references**

The given standard uses references to the following regulatory documents and standards:

Law of the Republic of Kazakhstan "On Education" dated July 27, 2007 # 319-III RKL (as amended and supplemented as of 02/26/2023);

Law of the Republic of Kazakhstan "On Technical Regulation" dated December 30, 2020 # 396-VI RKL;

Standard rules of organizations' activity implementing the degree programs of higher vocational education approved by Decree of Minister of Science and Higher Education of the Republic of Kazakhstan" dated 18.11.2022 #145;

RK SCSE 5.04.019-2022 "State compulsory standard of education of the Republic of Kazakhstan. Higher education. Bachelor. Basic provisions", approved by Decree of Minister of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 # 2 (with amendments and additions dated 02/20/2023 # 23);

Rules for organizing the educational process on credit technology of education, approved by Decree of Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2018 # 152 (with amendments and additions dated 09/23/2022 # 79);

RK ST 1.2 – 2021 RK SSTR. Procedure for developing the state standards and organization's standards;

RK ST 1.5 – 2019 RK SSTR. General requirements for constructing, presenting, designing and the content of standards;

GOST 2.004 – 88 USDD. General requirements for executing the design and technological documents on printing and graphic computer output devices;

GOST 2.104 – 2006 USDD. Main inscriptions;

GOST 2.105 – 95 USDD. General requirements for text documents.

GOST 2.106 – 96 USDD. Textual documents;  
GOST 2.301 – 68 USDD. Formats;  
GOST 2.302 – 68 USDD. Scale;  
GOST 2.304 – 81 USDD. Drawing fonts;  
GOST 2.316 – 2008 USDD. Rules for applying the inscriptions, technical requirements and tables on graphic documents. General provisions;  
GOST 2.321 – 84 USDD. Letter designations;  
GOST 7.1 – 2003 SSILP. Bibliographic record. Bibliographic description; General requirements and rules of compilation;  
GOST 7.9 – 95 (ISO 214 76). Abstract and synopsis. General requirements.  
GOST 7.12 – 93 SSILP. Bibliographic record. Abbreviations of words in Russian. General requirements and rules;  
GOST 7.32 – 2017 SSILP. Report on research work. Structure and rules of registration;  
GOST 8.417 – 2002 SSM. Units of values.

### **3 General regulations**

3.1 Unification and standardization of educational works is aimed at ensuring the uniform registration of students' educational and research works (RWS) within the higher educational institution, department in accordance with requirements of current regulatory documents.

3.2 Academic papers include the following forms of documents:

- Master's thesis;
- thesis (project);
- course work (project);
- practice report;
- RWS report;
- scientific article;
- control work;
- laboratory work;
- practical work;
- student's independent study.

3.3 Educational works, as a rule, contain textual and graphic materials. Textual documents that contain solid texts: Master's thesis, reports, calculation and explanatory note to course and diploma projects (works), control and laboratory work, etc. Also, documents that contain texts divided into graphs: specification for drawings, technological maps, tables, etc.

Graphic documents are divided into drawings, as well as graphs and diagrams.

## 4 Composition of educational work

### 4.1 Elements of educational work

4.1.1 In general, educational works in the specified sequence should include the following elements:

- a) cover;
- b) title page;
- c) task;
- d) abstract (for scientific articles – synopsis);
- e) content;
- f) introduction;
- g) main part;
- i) conclusion;
- j) list of accepted terms, a list of abbreviations;
- l) list of references;
- m) appendices;
- h) specifications.

Depending on the specific task or the teacher's requirements, the textual part can be supplemented. Educational work composition depends on the type of study work, a specific task and is given in **Table 1**, where "**plus**" sign indicates the mandatory element, "**minus**" sign shows the absence of an element and "**asterisk**" sign signifies optional (if necessary).

**Table 1 – Availability of educational work elements**

Elements of educational work	Type of educational work								
	Th/Pr	Cw/Pr	Mth	Report on Ip, Ep	Report on RWS	Scient. article	CGW	C/w	L/w
Cover, title page	+	–	–	–	–	–	–	–	–
	+	+	+	+	+	–	+	+	+
Task	+	+	+	+	+	–	+	+	–
Annotation (for scientific articles – synopsis)	+	–	+	–	+	+	–	–	–
Content	+	+	+	+	+	–	–	–	–
Introduction	+	+	+	+	+	–	–	–	–
Main part	+	+	+	+	+	+	+	+	+
Conclusion	+	+	+	+	+	–	+	–	+
List of accepted abbreviations, terms	+	+	+	+	+	–	–	–	–
List of used literature	+	+	+	+	+	+	+	+	–

*Continuation of Table 1*

Appendices	+	+	+	–	+	–	+	–	–
Specifications	+	+	–	+	–	–	–	–	–

Th/Pr – thesis (project)  
 Cw/Pr – course work (project)  
 Mth – Master's thesis (project)  
 \* Ip, Ep – industrial practice, educational practice  
 RWS – student's research work  
 CGW – calculation and graphic work  
 C/w – control work  
 L/w – laboratory work

4.1.2 The thesis (project) volume should be at least 30 pages. Master's thesis - of at least 60 pages. Title pages and Appendices to the specified volume of the thesis project (works) are not included.

## 4.2 Title page

4.2.1 Title page is executed on A4 sheets (Figure 1).

Line 1 – name of Ministry (capital letters).

Line 2 – the name of higher educational institution (lowercase letters, except for the first uppercase).

Line 3 – the name of Institute (lowercase letters, except for the first uppercase).

Line 4 – the name of Department (lowercase letters, except for the first uppercase).

The diagram illustrates the layout of a title page with 13 numbered boxes. Boxes 1, 2, 3, and 4 are horizontal and centered. Boxes 5 and 6 are smaller, stacked vertically on the right side. Boxes 7, 8, 9, and 10 are horizontal and centered. Boxes 11 and 12 are horizontal and side-by-side. Box 13 is horizontal and centered below boxes 11 and 12.

Figure 1 - Title page design

Lines 1-4 are located in the center of the page.

Line 5 – restrictive vulture (if necessary).

Line 6 – vulture of defence admission by Department head.

Lines 5-6 are located at the page's right border with alignment of the text block's left edge.

Line 7 – type of educational work (letters – uppercase).

Line 8 – educational work topic (lowercase letters, except the first uppercase).

Line 9 – cipher and the name of Degree program

Lines 7-9 are located in the center of the page.

Line 10 – the word "Performed" is on the left, the trainee's surname and initials are indicated on the right opposite.

Line 11 – signature of diploma projects' (works) reviewer (Full name., academic degree, title, other regalia, date of signing).

Line 12 – supervisor of academic work (full name, academic degree, title and other regalia of the supervisor, date of signing).

Line 13 – city and year of publication (without specifying the word "year" or "y").

Examples of executing the cover and title pages for academic papers are given in **Appendices A, B, G, D, J, L, M, N.**

### 4.3 Task

Task for completing the academic work is given by the supervisor. Examples of designing the tasks are given in **Appendices B, E, and I.**

### 4.4 Abstract

Abstract is a brief description of the work and its intended purpose and is performed in **the state, Russian and foreign languages**. Abstract indicates the type of educational work, the subject (object) of the presentation and its main characteristics (the purpose of the work, the subject and aspect of its coverage), the distinctive features of the work (problem statement, solution of a particular issue, recommendations). Abstract should not retell the content of the work.

The word "**ABSTRACT**" is written in the form of a title in capital letters in the center and is not numbered.

Abstract in three languages is fulfilled on one page.

### 4.5 Synopsis

Synopsis is an abbreviated summary of the primary document's content (or part thereof) with basic information and its conclusions. Synopsis is performed according to GOST 7.9 – 95.

Synopsis should contain:

- information about the volume, the number of illustrations, tables, the number of sources used;
- list of keywords (from 5 to 15 words);
- synopsis text.



Summary text is compiled based on the following plan:

- the volume of the synopsis (should not exceed 500 printed characters);
- the topic of the subject (object);
- the nature and purpose of the work.

## 4.6 Content

Content of educational work includes the numbers and names of sections, subsections, as well as such elements in the explanatory note as introduction, conclusion, list of references and appendices indicating the number of sheets (pages).

Content is included in the total number of sheets of the given work. The word "**CONTENT**" is written in **capital letters** in the form of a title in the center and is not numbered.

The names included in the content are written in lowercase letters, starting with a **capital letter**.

The free space in the line up to the page number should not be filled with dots.

**Example:**

### CONTENT

Introduction		7
1	Analytical review	8
1.1	Devices, materials, reagents	
1.2	Analysis of results ...	
1.3		
2		
2.1		
2.2		
3		
3.1		
...		
Conclusion		
List of the used literature		
Appendix A		
Appendix B		

## 4.7 Introduction

Introduction is the first structural element of educational work. The word "**INTRODUCTION**" is written in the form of a title in capital letters in the center and is not numbered. Introduction should briefly characterize the current state of the

scientific and technical problem to which the work is devoted, should reflect the purpose, objectives of the work, a clear formulation of scientific novelty, relevance of the work, theoretical and methodological basis, practical basis of writing and justification of the need for its implementation.

#### **4.8 Main part**

The main part of the academic work includes sections in accordance with the requirements of normative documents developed by the graduating departments, which are the main organisational units of the institutes providing the implementation of Bachelor's and Master's degree programmes. These documents reflect the direction and themes of research of a particular scientific school, scientific direction of the department, master's dissertations, the composition and content of theoretical, research and scientific-experimental work, the methodology of scientific and experimental research.

In the main part provide data reflecting the essence, content, methodology and main results of work and research.

#### **4.9 Conclusion. Results**

4.9.1 Conclusion should contain an assessment of the work results as a whole in terms of its compliance with the task. Conclusion's textual part gives a technical and economic assessment of the work performed, scientific, social or cognitive value of the work results.

In Conclusion it should be indicated how the work was completed (due to obtaining new research methods and principles, obtaining qualitative or quantitative characteristics of objects, phenomena, developing recommendations, methods, projects of new technological processes, modes, introduction into production). The word "**CONCLUSION**" is written in the form of a heading in the center in *capital letters* and is not numbered.

4.9.2 Reports on laboratory work should contain results in which the analysis of the conducted educational experiments is given, the data obtained are compared with theoretical calculations, cognitive value of the results obtained for assimilating the educational material is noted. The word "**RESULTS**" is written in the center by capital letters, in the form of a title and is not numbered.

#### **4.10 List of terms. List of abbreviations**

4.10.1 If a specific terminology is accepted in the document, then at the end of it (before the list of references) there should be a list of accepted terms with appropriate explanations. The list is included in the document content.

4.10.2 Abbreviations used in educational work must comply with GOST 2.316 and GOST 7.12. If a special system of reducing the words or names is adopted in the document, then it should contain a list of accepted abbreviations, which is placed at the end of documents before the list of terms.

#### **4.11 List of the used literature**

Sources in the list of used literature should be placed in the order of their appearance in the text of the thesis (project). When referring to sources in the text,

their ordinal number in the list of references should be given in square brackets. The words "**LIST OF THE USED LITERATURE**" are written in the form of a title in the center by **capital letters** and are not numbered.

In **LIST OF THE USED LITERATURE** structural element, sources are numbered in **Arabic numerals and printed with paragraph indentation without a dot**. Sources' bibliographic description is compiled in accordance with GOST 7.1-2003. Example of the design of a bibliographic description of literature is shown in **Appendix P**.

List of references may include articles from journals, materials of scientific conferences, from electronic sources, as well as state, international standards and other regulatory and technical documents.

## **4.12 Appendices**

4.12.1 Material, supplementing the educational work, may be placed in appendices. Such appendices can be, for example, graphic material, large format tables, calculations, descriptions of equipment and devices, descriptions of algorithms and programs of tasks solved on electronic computers, etc.

Each appendix starts with a new sheet. If there are more than one, then the appendices are designated with capital letters of the Russian alphabet, starting with **A**, with the exception of **Ё, Ё, Ъ, О, Ч, Ы, Ь, Ь** letters. After the word "**Appendix**" follows a letter denoting its sequence. The word "**Appendix**" is written in the form of a title centered in **lowercase letters** with the first uppercase.

It is recommended to include in appendices copies (photocopies are possible), millimeters, tracing paper, etc. on **1:1** or **1:2** scale of the graphic material submitted for defense. Copies of the graphic material in appendices should be folded so that the stamp is on the front of the folded sheet and is visible without first unfolding. When folding the sheet, it is also necessary to ensure that the folded sheet does not go beyond the boundaries of **A4** sheet and has margins for binding.

4.12.2 The text of each appendix, if necessary, can be divided into sections, subsections, paragraphs, sub-paragraphs. In appendices, sections, subsections, paragraphs, sub-paragraphs, graphic material, tables and formulas are numbered within each appendix. The letter of this appendix is placed before the numbers.

Illustrations and tables are numbered within each appendix:

**Example: Figure A.1, Table A.1.**

If appendices are placed on several sheets, then "**Continuation A**" should be written on each subsequent sheet. Appendices should have end-to-end page numbering in common with the rest of the study work.

## **5 Requirements for designing the text of educational works**

### **5.1 Methods of performing the educational works**

5.1.1 Educational works' text is fulfilled using computer printing.

Educational works' text is officially carried out in the state or Russian languages in accordance with Law of the Republic of Kazakhstan "On Languages in the Republic of Kazakhstan".

Competitive, research papers should be printed using computer printing.

5.1.2 Educational works' text should be performed on one side of A4 white paper (210x297 mm) based on GOST 2.301 – 68. If necessary, large tables or illustrations can be made in A3 (297x420 mm) and A2 (420x594 mm) formats.

5.1.3 The sheets of the textual part are not framed. Exception is the specifications, which are issued according to GOST 2.106 – 96.

When using computer printing, the text of educational works should have the following margins: *upper – 20 mm, lower -25 mm; left – 30 mm; right - 10 mm, for Master's thesis, the right margin is 15 mm.*

5.1.4 When using computer printing, typing is executed in Microsoft Word editor, in **Times New Roman** font. Title pages and abstracts are performed in **font # 12**. Educational work is carried out on one side of A4 sheet *with one interval in font # 14*, in the head of the tables it is allowed - *with one interval in font # 12*. The density of the text should be the same. **Paragraph indentation** within the text must be the same and equal *to five characters*.

5.1.5 It is necessary to enter individual words, formulas, symbols, letters of Latin and Greek alphabet into the text of educational works, as well as to make drawings in black ink, paste or ink. In this case, the density of the inscribed text should be close to the density of the executed text.

5.1.6 Misprints, typos and graphic inaccuracies found during executing the text of educational work should be corrected by erasing or applying in the same place, or by entering between the lines of the corrected text (graphics) in typewritten way or in black toner, ink, paste in the handwritten way.

Damage to the sheets, blots, traces of the previous text not completely deleted are not allowed. *No more than five corrections* per page are allowed.

5.1.7 Text of specification is executed in drawing font, drawing pencil or ink.

5.1.8 All sheets of academic papers should be numbered end-to-end, starting with the title page, including appendices and specifications. Page numbering is put down from the page where "INTRODUCTION" is placed, in Arabic numerals *in the center of the lower part of the sheet without a dot*.

## 5.2 Division of the text of educational work

5.2.1 Text of educational paper should be divided into sections. Sections can be divided into paragraphs or into subsections and paragraphs. Items can be divided into sub-items if necessary.

When dividing educational work text into paragraphs or sub-paragraphs, it is necessary that each paragraph, sub-paragraph contains complete information.

5.2.2 Sections, subsections, paragraphs and sub-paragraphs should be numbered in Arabic numerals and written with **paragraph indentation**.

**Each section** of the thesis (project) should begin **with a new sheet (page)**.

Sections should be numbered sequentially within the entire text, with the exception of appendices.

**Example: 1, 2, 3 etc.**

. The subsection or item number includes the section number and the serial number of the subsection or item, separated by a dot.

**Example: 1.1, 1.2, 1.3 etc.**

The sub-item number includes the number of the section, subsection, paragraph and the serial number of sub-item, separated by a dot.

**Example: 1.1.1.1, 1.1.1.2, 1.1.1.3 etc.**

After the number of the section, subsection, paragraph and sub-paragraph in the text of educational work, **the dot is not put.**

If the text of educational work is divided only into paragraphs, they should be numbered, with the exception of appendices, by ordinal numbers within the entire text.

If a section or subsection has one paragraph or a paragraph has one subparagraph, then it should not be numbered.

5.2.3 Sections and subsections of the text of educational work should have headings. Items, as a rule, do not have headings.

Headings should clearly and briefly reflect the content of sections, subsections.

Sections' headings, subsections should begin with **paragraph indentation** with a capital letter without a dot at the end, without underlining.

If the title consists of two sentences, they are separated by a dot.

Example:

**1 Analytical review. Current trends** (section name)

(1-line spacing)

**1.1 Devices, materials, reagents** (subsection name)

(1-line spacing)

Text ....

(2-line spacing after the text, before the new subsection)

**1.2 Analysis of results**

The distance between the heading of section and subsection when using computer printing is 1line. Subsections within one section are separated by a two-line deviation from the text.

Enumerations can be given inside paragraphs or sub-paragraphs. Before each position of enumeration, a hyphen should be placed, if necessary, references in the text of educational work to one of enumerations, a lowercase letter of the Russian alphabet, after which a bracket is placed without a dot after it. To further detail the enumeration, it is necessary to use Arabic numerals, after which a parenthesis without a dot is placed and written with two paragraph indents.

At the end of enumerations, a semicolon or a dot is put.

Accordingly, each new enumeration position begins with **paragraph indentation** with a lowercase or uppercase letter.

**Example 1:**

Vibration in devices may occur as a result of:

- imbalance of rotating elements;
- easy deformation of the frame;
- aerodynamic loads.

**Example 2:**

- a) \_\_\_\_\_;
- b) \_\_\_\_\_;
- 1) \_\_\_\_\_; 2) \_\_\_\_\_;
- c) \_\_\_\_\_.

### 5.3 Requirements for presenting the text of educational work

5.3.1 Text of educational works should be concise, accurate, and not subject to different interpretations.

Terms, definitions, designations and abbreviations established by the current standards or legislative acts should be used in the text of educational works.

5.3.2 Roman numerals should be used only to indicate the grade (category, class) of the product, valence of chemical elements, quarters of the year, half-year. In other cases, Arabic numerals are used.

5.3.3 Within the text of educational paper, the units of physical quantities for the same indicator should, as a rule, be constant. Standardized units of physical quantities, their names and designations in accordance with GOST 8.417-2002 should be used in the text of educational work.

5.3.4 It is not allowed in the text of educational work:

- to apply for the same concept various scientific and technical terms similar in meaning (synonyms), as well as foreign words and terms if available equivalent words and terms in Kazakh and Russian;

- apply reduction of words, except for those established by the rules of Kazakh and Russian spelling and relevant standards;

- apply arbitrary word formations;
- abbreviate the designations of physical quantities units, if they are used without numbers, with the exception of physical quantities units in the heads and sides of tables and in transcripts of letter designations included in formulas and figures.

5.3.5 In the text of educational paper, with the exception of **formulas, tables, figures**, it is not allowed:

- to use "-" mathematical sign before negative values of quantities (the word "minus" should be written);

– to use "Ø" sign to indicate the diameter (the word "diameter" should be written). When specifying the size or maximum deviations of diameter in the figures, "Ø" sign should be written before the dimensional number;

– apply non-numeric mathematical signs, for example, > (greater than), (less than), (equal to), (greater than and equal to), (less than and equal to), ≠ (not equal to), as well as signs # (number) and % (percentage) etc.

In the text of educational works, it is necessary to write (more), (less), (equal), (greater or equal), "number", "percentage" etc.;

– give the index of standard without its designation when referring to standards (GOST, RK ST, F ST, ST KazNRTU etc.), other types and categories of documents that have them, as well as place the index and designations of the document on different lines or pages of educational paper text.

## 5.4 Formulas

5.4.1 Formulas, with the exception of formulas in appendices, should be numbered end-to-end with Arabic numerals, which are written at the formula level on the right in parentheses at the end of the line. ***At least one free line*** must be left above and below each formula or equation.

**Example:** (1), (2), (3) and so on. One formula is denoted by - (1).

References in the text to ordinal numbers of formulas are given in parentheses.

Example: in formula (1).

Formulas, placed in appendices, should be numbered separately in Arabic numerals within each appendix with the letter designation of appendix indicated before the digit.

**Example:** in the formula (B.1).

5.4.2 The numbering of formulas within the section is allowed. In this case, the formula number consists of the section number and ordinal number of the formula, separated by a dot.

Example - (3.1), (3.2), (3.3).

5.4.3 Explanations of symbols and numerical coefficients included in the formula, if they are not explained earlier in the text or in the appendix, should be given, as a rule, directly under the formula.

Explanations of each character should be given from a new line in the sequence in which the characters are given in the formula.

The first line of explanation should begin with the word "where" (without a colon) with paragraph indentation.

**Example:** The density of each sample,  $\text{kg/m}^3$ , is calculated due to the formula

$$\rho = m/v = 12/3 = 4 \text{ kg/m}^3 \quad (1)$$

where m is the mass of sample, kg;

v is the volume of sample,  $\text{m}^3$ .

Formulas that follow one another and are not separated by text are separated

by a comma.

$$S = V \cdot t , \quad (1)$$

$$\rho = m/v \quad (2)$$

5.3.3 It is allowed to transfer formulas to the next line only on the signs of operations performed, and the sign at the beginning of the next line is repeated. When transferring the formula to the sign of multiplication operations, "×" sign is used.

5.3.4 The order of presentation in educational text of mathematical equations is the same as formulas.

In the text of the thesis, the formulas used must be typed using the formula editor. **It is not allowed to place scanned formulas.**

## 5.5 Tables

5.5.1 Tables are used for better visibility and convenience of comparing the indicators. Digital material, as a rule, is made out in the form of tables.

### *Example:*

Table 2.1 – Data of the technological equipment used in rolling mill production


5.5.2 The table name should reflect its content, be precise, concise. The table name should be placed immediately above it with paragraph indentation. After the table number, a dot is not put. After the number there is a dash, then the table name. The table itself is placed from the left edge, without paragraph indentation and is designed according to the width of the window (page). A line is skipped after the name.

When transferring a part of the table to the same or other pages, the table name is placed only above the first part of the table.

5.5.3 Tables, with the exception of annex tables, should be numbered in Arabic numerals through numbering.

The table of each appendix is designated by a separate numbering in Arabic numerals with addition of the appendix designation before the digit.

If there is one table in the text, it should be designated "Table 1" or "Table A.1" if it is given in Appendix A.

All tables should be referenced in the text of educational paper, the word



"table" should be written with the reference indicating its number.

It is allowed to number tables within a section. In this case, the table number consists of partition number and ordinal number of the table, separated by a dot.

**Example:** "Table 2.1" – Table 1 in section 2

5.5.4 Headings of graphs and lines of the table should be written with a capital letter, and the subheadings of graphs should be written with a lowercase letter if they make up one sentence with the title, or with a capital letter if they have an independent meaning. There are no dots at the end of headings and subheadings of the tables. Headings and subheadings of graphs are indicated in the singular. It is allowed to use a font size smaller in the table than in the text.

5.5.5 It is not allowed to separate the headings and subheadings of the sidewall and graphs with diagonal lines.

Graph headings, as a rule, are written in parallel to the lines of the table. If necessary, perpendicular arrangement of graph headings is allowed.

It is not allowed to alternate perpendicular and parallel headings in the table.

5.5.6 Table, depending on its size, is placed under the text in which the link to it is given for the first time, or on the next page, and if necessary in the appendix.

It is allowed to place tables along the length of the side of educational paper.

If the lines of the table column go beyond the page format, then the table is divided into parts, placing one part under another or next to it, while in each part of the table its head or sidewall is repeated.

The word "Table" is indicated once on the left above the first part of the table, above the other parts are the words *in italics*: "*Continuation of the table*" indicating the number (designation) of the table.

If the table is interrupted at the end of the page, and its continuation will be given on the next page, then in the first part of the table, the lower horizontal line bounding the table is not drawn.

Tables with a small number of graphs can be divided into parts and put one part next to another on the same page, while repeating the head of the table.

5.5.7 "***The number in order***" column is not allowed to be included in the table.

Numbering of the table graphs with Arabic numerals is allowed in cases when there are references to them in the text of educational works, when dividing the table into parts, as well as when transferring part of the table to the next page.

If it is necessary to number indicators, parameters or other data, the ordinal numbers should be indicated in the first column (side of the table), immediately before their name.

To shorten the text of headings and subheadings, separate concepts are replaced by alphabetic designations established by GOST 2.321, or other designations if they are explained in the text or shown in illustrations, for example, ***D – diameter; H – height; L – length.***

Tables should be separated from the text by one empty line.

## 5.6 Illustrations

5.6.1 Graphic material in the text of educational work is placed in the study work for its better understanding, as well as for the purpose of establishing the object's properties or characteristics. Graphic material is presented under "figure" term, and the figure's name may contain – diagrams, diagrams, graph etc.

Graphic material should be placed directly after the text in which it is mentioned for the first time, or on the next page, and if necessary, in the appendix.

5.6.2 Figures placed in the text must comply with requirements of the state standards of Unified System of Design Documentation.

Illustrations can be computer-generated and colored. All illustrations in the thesis (project) should be referenced.

5.6.3 Figure may have a thematic name, which is placed under it, placed in the center of the sheet and recorded as follows, example:

Figure 1 – Device details (Electrical circuit diagram, status diagram, graph ...), If necessary, explanatory data is placed under the graphic material.

"Figure" word and the name are placed after explanatory data.

When referring to figures, it should be written "in accordance with Figure 2" with end-to-end numbering and "... in accordance with Figure 1.2" when numbering within the section.

5.6.4 Figures, with the exception of the graphic material of appendices, should be numbered in Arabic numerals through numbering. If there is one drawing, then it is designated "Figure 1".

The numbering of figures within the section is allowed. The figure number in this case consists of section number and sequence number of the figure, which is separated by a dot, thus:

Figure 1.1 – The name of the figure (Scheme ..., diagram ..., graph...)

Figure of each appendix is indicated by a separate numbering in Arabic numerals with the addition of appendix designation before the digit.

### **Example:**

Figure A.3 – The name of the figure (Scheme ..., diagram ..., graph...)

5.6.5 Figure (scheme, diagram etc.), as a rule, should be performed on one page. If the figure does not fit on one page, it is allowed to transfer it to other pages. At the same time, the thematic name is placed on the first page, explanatory data – on each page and under them write "Figure ..., sheet ..." if there are several drawings, and "Figure 1, sheet ..." if there is one drawing.

5.6.6 Units of measurement should be applied to the diagram in one of the following ways:

- at the end of the scale between the last and penultimate number of the scale (if there is not enough space, it is allowed not to put the penultimate number);
- together with the name of the variable after the comma;
- at the end of the scale after the last number, together with designation of the

variable in the form of a fraction, in the numerator of which is designation of the variable, and in denominator is the designation of measurement unit.

Units of measurement of angles (degrees, minutes, seconds) should be applied once – at the last number of the scale.

Figure 2 shows one of the cases of diagram execution (dependencies ...)

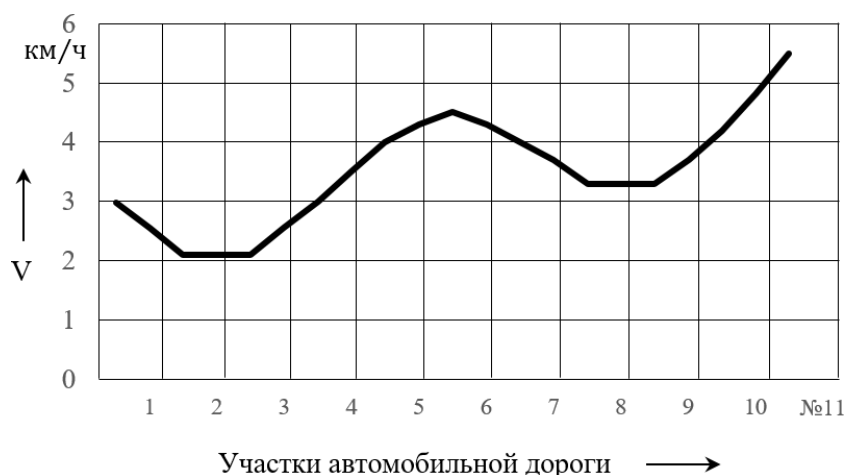


Figure 2 – Dependence of speed on passable route section

## 5.7 Links

References are allowed in educational work:

- to the standards applied in the Republic of Kazakhstan in accordance with the established procedure;
- legislative and other regulatory acts;
- special literature etc.

Links should be given with indication in square brackets of the number according to the list of references, designed based on GOST 7.1 – 2003 requirements.

**Example:** [1], [2] etc.

## 5.8 Notes

5.8.1 Notes are given in educational work, if explanatory or reference data are needed to the content of the text, tables or graphic material.

Notes should not contain requirements.

5.8.2 Notes should be placed directly after the text, graphic material or in the table to which the given notes relate, and printed **with the capital letter from the paragraph to the order and not underlined**. If there is one note, then a dash is placed after the word "Note".

A note to the table is placed at the end of the table above the line indicating the end of the table.

One note is not numbered.

**Example:**

**The note** – \_\_\_\_\_

Several notes are numbered in Arabic numerals in order.

**Example:**

**Notes:**

1 \_\_\_\_\_;

2 \_\_\_\_\_.

**5.9 Footnotes**

5.9.1 If it is necessary to explain certain data given in the text of educational paper, then these data should be indicated by superscript footnotes.

Footnotes in the text are placed with paragraph indentation at the end of the page on which they are indicated, separated from the text by a short thin horizontal line on the left side, and to the data located in the table, at the end of the table above the line indicating the end of the table.

5.9.2 The footnote sign is placed immediately after the word, number, symbol, sentence to which the explanation is given, and before the explanation text.

5.9.3 The footnote sign is executed in Arabic numerals without a bracket or with a bracket and placed at the level of the upper cut of the font.

**Example:**

"... *an announcement on the Internet*<sup>2)</sup> ...".

The numbering of footnotes is separate for each page.

It is allowed to use asterisks instead of numbers: \*, \*\* etc.

The use of more than four asterisks is not allowed.

Transferring the footnotes from this page to the next is not allowed, except for the tables in which they are given at the end.

**6 General requirements for graphic materials****6.1 Format – GOST 2.301-68**

6.1.1 Format with dimensions of the sides  $1189 \times 841$  (A0), the area of which is equal to  $1 \text{ m}^2$ , and other formats obtained by sequentially dividing into two equal parts parallel to the smaller side of the corresponding format, are taken as the basis. Designations and dimensions of the sides of the main formats must correspond to those specified in Table 2.

**Table 2 – Format designations**

Format designations	Dimensions of the format's sides, mm
A0	841×1189
A1	594×841
A2	420×594
A3	297×420
A4	210×297

If necessary, it is allowed to use A5 format with dimensions of the sides 148 × 210mm. It is allowed to apply additional formats formed by increasing the short sides of the main formats by a multiple of their sizes. The sizes of derived formats, as a rule, should be selected according to Table 3, for example, A0×2; A4×8 etc.

**Table 3 – Format sizes**

Multiplicity	Format				
	A0	A1	A2	A3	A4
1	1189×1682	-	-	-	-
2	1189×2523	841×1783	549×1261	420×891	297×630
3	-	841×2378	549×1682	420×1180	297×841
4	-	-	549×2102	420×1486	297×1051
5	-	-	-	420×1783	297×1261
6	-	-	-	420×2080	297×1471
7	-	-	-	-	297×1682
8	-	-	-	-	297×1892

## **6.2 Rules for drawing the inscriptions, technical requirements and tables – GOST 2.316-2008**

6.2.1 In addition to the image of an object with dimensions and maximum deviations, the drawing may contain:

- a) a textual part consisting of technical requirements and (or) technical characteristics;
- b) inscriptions with designating the images, as well as those related to individual elements of the product;
- c) tables with dimensions and other parameters, technical requirements, control complexes, symbols etc.

**Note:** In terms of area, the drawing should be filled in at 90 percent, in terms of density – at 75 percent.

6.2.2 Executing the main inscription of the drawing must be carried out in accordance with GOST 2.104 requirements.

6.2.3 The textual part, inscriptions and tables are included in the drawing in cases when the data, instructions and explanations contained in them cannot or is

impractical to express graphically or by symbols.

6.2.4 The content of the text and inscriptions should be concise and accurate and comply with GOST 2.104 requirements.

6.2.5 In a drawing for which the standard has a table of parameters (for example, a gear wheel, worm etc.), it is placed based on the rules established by GOST 2.316. All other tables are placed on a free sheet of the drawing field to the right of the image or below it and are performed according to GOST 2.105 – 95. Tables placed in the drawing, they are numbered within the drawing if there are references to them in technical requirements. At the same time, the word "Table" with an ordinal number (without the "#" sign) is placed above the table on the left. If there is only one table in the drawing, then it is not numbered, and the word "Table" is not written.

6.2.6 Technical requirements in the drawing are stated by grouping together homogeneous and similar in nature requirements. If it is necessary to specify the product's technical characteristics, it is placed separately from technical requirements with independent numbering of items, in the free field of the drawing under "Technical characteristics" heading. At the same time, "Technical requirements" heading is placed above the technical requirements. Both headings are not underlined.

Technical requirements are set out in the sequence corresponding to GOST 2.316.

### 6.3 Scales – GOST 2.302 -68

6.3.1 Scales of the images in the drawings should be selected from the following row.

Scale of reduction	1:2	1:2,5	1:4	1:5	1:10	1:15	1:20	1:25	1:40
	1:50	1:75	1:100	1:200	1:400	1:500	1:800	1:1000	
Full size	1:1								
Scope of design	2:1	2,5:1	4:1	5:1	10:1	20:1	40:1	50:1	100:1

When designing the master plans of large objects, it is allowed to apply scales: 1:1000; 1:2000; 1:5000; 1:10000; 1:20000; 1:25000; 1:50000.

6.3.2 If necessary, it is allowed to use the zoom scale  $(100n):1$ , where  $n$  is an integer.

6.3.3 To perform a geological surveying drawing, in addition to the above, scales should be used

1:100000; 1:200000; 1:300000; 1:500000.

6.3.4 The scale specified in the column of the main inscription of drawing intended for this purpose should be designated by type: 1:1; 1:2 etc., and in other cases – by type: M1:1; M1:2; M2:1 etc.

## **6.4 Lines – GOST 2.303-68**

6.4.1 GOST 2.303 – 68 establishes the outline and basic designations of lines in drawings of all industries and construction.

Special purposes of the lines (the image of the thread, boundaries of zones with different surfaces etc.) are defined in the relevant USDD standards.

## **6.5 Fonts – GOST 2.304-81**

6.5.1 All inscriptions on drawings are applied in the standard font.

6.5.2 The slope of letters and numbers to the base of the string should be 75 degrees. Titles, designations in the main inscription and on the drawing field are allowed to be written without inclination, except for the letters of the Greek alphabet.

6.5.3 Font sizes are determined by the height of capital letters in millimeters. The following font sizes are set:

2,5; 3,5; 7; 10; 14; 20; 28; 40.

6.5.4 The ratio between the height and other sizes of letters and numbers for fonts of all sizes is based on GOST 2.304.

6.5.5 The height of letters and numbers on drawings made in pencil – not less than 3.5 mm, ink – not less than 2.5 mm.

6.5.6 For geological maps and sizes, inscriptions are made out in topographic fonts in accordance with requirements for topographic materials (GOST 2.850 – GOST 2.857).

## **6.6 Specification – GOST 2.106-96**

6.6.1 Specification is a table containing a list of all the components included in this specified product and related to its unspecified components.

6.6.2 Specification is compiled on separate sheets for each assembly unit according to Forms 1 and 1a of GOST 2.106 – 96. Specification generally consists of sections:

- documentation;
- complexes;
- assembly units;
- details;
- standard products;
- other products;
- materials;
- kits.

Presence of certain sections is determined based on specified product composition.

Content of the sections must comply with GOST 2.106 – 96 requirements.

## 6.7 Design of graphic diagrams and other graphic materials

Design of graphic diagrams and other graphic materials is carried out according to standards requirements of Unified System of Design and Technological Documentation.

## 6.8 Design of demonstration materials

6.8.1 When defending Master's theses, diploma and course projects (works), *illustrative material* (diagrams, tables, analytical calculations etc.) is recommended to be designed in the form of demonstration posters according to GOST 2.605.

6.8.2 Each poster should contain:

- a) title;
- b) the pictorial part;
- c) explanatory text (if necessary).

The poster name should be given in the form of a title in the upper middle part of the poster. The poster title should be brief and correspond to the poster's content.

6.8.3 The poster's pictorial part must have data explaining the topic content:

a) for products – external views and sections showing the structural device and interaction of components, diagrams, tables, formulas, graphs, diagrams for various purposes, explanatory text of the device;

b) for technological processes – a conditional or schematic representation of the equipment in technological sequence, as well as techniques for working on it;

c) tables, graphs, diagrams displayed on posters are drawn up in compliance with requirements of the given standard.

6.8.4 Explanatory text should be located on the poster's free field and contain the names of the product components or elements of the section depicted on the poster, explanations, designations placed on diagrams etc.

6.8.5 The names, designations of elements, the posters' text part must correspond to the names, symbols and explanatory note's textual part.

6.8.6 The posters' frame is made at a distance of 20 mm from the sheet's edge along the perimeter. ***When making a poster without observing the scale, the main inscription and additional columns are not drawn.***

6.8.7 When making drawings on posters in compliance with the scale and requirements of USDD, ***the main inscription is drawn necessarily. (GOST 2.104-2006).***

6.8.8 Posters may be executed owing to color printing, felt-tip pens, ink of various colors. Inscriptions on the posters are applied in drawing font based on GOST 2.304. The use of standard fonts is allowed during the computer preparation of posters.

6.8.9 With the purpose to organize accounting and storage, it is recommended to indicate the type and topic of educational work, the author, the group index and department name in the lower right part of the poster.



## **6.9 General requirements for materials on transparent film**

6.9.1 Both drawings and demonstration posters can be made on transparent film for the purpose of their subsequent demonstration.

6.9.2 Finished materials made on transparent film must have A4 format (210x294).

When preparing drawings, they can be executed in A3 format (297x420 mm) with their subsequent reduction.

6.9.3 Demonstration posters are made in accordance with subsection 6.8 requirements of the given organization standard.

6.9.4 Defense of the thesis (project) can be carried out using electronic resources in the form of multimedia presentations based on modern technical means and achievements in information and communication technologies sphere.

## **Bibliography**

[1] RK ST 1.5-2019 General requirements for constructing, presenting, designing and the content of standards.

[2] RK ST 1.2-2021. Procedure for developing the state standards and organizations standards.

[3] GOST 2.105-95 USDD. General requirements for textual documents.

[4] Instructional documents regulating the implementation of experimental degree programs of Master's and Doctoral studies.

[5] Kazakh-Russian, Russian-Kazakh terminological dictionary. Vol.7, 10, 19. – Almaty: Rauan, 2000.

[6] International Manual ISO/IEC 2:1996. Standardization and related activities. General dictionary.

**Appendix A**

Sample of designing the cover of Diploma thesis (Master's thesis)

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

\_\_\_\_\_  
(*full name of the trainee*)

\_\_\_\_\_  
(*theme of Diploma thesis / Master's thesis*)

**DIPLOMA THESIS (MASTER'S THESIS)**

\_\_\_\_\_  
(*code and name of the degree program*)

Almaty 20\_\_\_\_

**Appendix B**

Sample of the title page of a thesis

**MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN****Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"**Institute \_\_\_\_\_  
(*Institute name*)Department \_\_\_\_\_  
(*Department name*)**ADMITTED TO DEFENSE**

Head of Department \_\_\_\_\_

\_\_\_\_\_  
(*Department name*)\_\_\_\_\_  
(*academic degree, title*)

signature \_\_\_\_\_ Full name \_\_\_\_\_

«\_\_\_» \_\_\_\_\_ 20\_\_\_\_.

**DIPLOMA THESIS**On the theme «\_\_\_\_\_»  
(*theme of diploma thesis*)\_\_\_\_\_  
(*code and name of the degree program*)

Executed

\_\_\_\_\_  
(*full name of the trainee*)

Reviewer

Scientific supervisor

\_\_\_\_\_  
(*academic degree, title*)\_\_\_\_\_  
(*academic degree, title*)signature \_\_\_\_\_ full name \_\_\_\_\_  
«\_\_\_» \_\_\_\_\_ 20\_\_\_\_.signature \_\_\_\_\_ full name \_\_\_\_\_  
«\_\_\_» \_\_\_\_\_ 20\_\_\_\_.

Almaty 20\_\_\_\_

**Appendix B**

Sample of designing the task for the completion of the thesis

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(Institute name)

Department \_\_\_\_\_  
(Department name)

\_\_\_\_\_  
(code and name of the degree program)

**APPROVED**

Head of Department \_\_\_\_\_

\_\_\_\_\_  
(department name)

\_\_\_\_\_  
(academic degree, title)

signature \_\_\_\_\_ full name \_\_\_\_\_  
«\_\_» \_\_\_\_\_ 20\_\_.

**TASK**  
**for completing the thesis**

To the trainee \_\_\_\_\_  
(full name of the trainee)

Theme: \_\_\_\_\_  
(diploma thesis name)

Approved by the decree \_\_\_\_\_ # dated «\_\_» \_\_\_\_\_ 20\_\_.  
(supervising vice-rector)

Deadline for submitting the completed work «\_\_» \_\_\_\_\_ 20\_\_.

Initial data for the thesis: \_\_\_\_\_

Summary of the thesis: \_\_\_\_\_

a) \_\_\_\_\_

b) \_\_\_\_\_

c) issues of life safety and labor protection d) calculation of economic efficiency of the elaboration

List of graphic material (with exact indication of required drawings):

demonstrated slides of presenting the work

Recommended basic literature: from \_\_\_\_\_ names \_\_\_\_\_

**Continuation of Application B****SCHEDULE  
of preparing the thesis (project)**

Name of sections, list of issues being developed	Deadlines for submission to the scientific supervisor	Notes

**Signatures**

of consultants and the norm controller for the completed thesis (project) with an indication of the relevant sections of the work (project)

Names of sections	Consultants, full names (academic degree, title)	Date of signing	Signature
Economic part			
Labor protection			
Normcontroller			

Scientific supervisor

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*Full name*

Task was accepted for execution by the trainee

\_\_\_\_\_  
*signature*

\_\_\_\_\_  
*Full name*

Date

«\_\_\_\_» \_\_\_\_\_ 20\_\_\_\_

**Appendix G**

Sample of designing the cover of the diploma project

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

—  
code and name of the degree program

\_\_\_\_\_  
(*full name of the trainee*)

\_\_\_\_\_  
(*theme of the diploma project*)

**EXPLANATORY NOTE  
to the diploma project**

—  
code and name of the degree program

Almaty 20\_\_

**Appendix D**

Sample of designing the title page of the diploma project

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

**ADMITTED TO DEFENSE**

Head of Department \_\_\_\_\_

\_\_\_\_\_  
(*Department name*)

\_\_\_\_\_  
(*academic degree, title*)

\_\_\_\_\_  
*signature* *full name*  
«\_\_\_» \_\_\_\_\_ 20\_\_.

**EXPLANATORY NOTE**

to the diploma project

On the theme: «\_\_\_\_\_»  
(*theme of the diploma project*)

\_\_\_\_\_  
(*code and name of the degree program*)

Executed

\_\_\_\_\_  
(*full name of the trainee*)

Reviewer

Scientific supervisor

\_\_\_\_\_  
(*academic degree, title*)

\_\_\_\_\_  
(*academic degree, title*)

\_\_\_\_\_  
*signature* *full name*  
«\_\_\_» \_\_\_\_\_ 20\_\_.

\_\_\_\_\_  
*signature* *full name*  
«\_\_\_» \_\_\_\_\_ 20\_\_.

Almaty 20\_\_

**Appendix E**

Sample of the task for completing the diploma project

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(Institute name)

Department \_\_\_\_\_  
(Department name)

—  
(code and name of the degree program)

**APPROVED**

Head of Department \_\_\_\_\_

\_\_\_\_\_  
(Department name)

\_\_\_\_\_  
(academic degree, title)

\_\_\_\_\_  
signature full name  
«\_\_» \_\_\_\_ 20\_\_.

**TASK**  
**for completing the diploma project**

To the trainee \_\_\_\_\_  
(full name of the trainee)

Theme: \_\_\_\_\_  
(diploma thesis name)

Approved by the decree \_\_\_\_\_ # dated «\_\_» \_\_\_\_ 20\_\_.  
(supervising vice-rector)

Deadline for submitting the completed work «\_\_» \_\_\_\_ 20\_\_.

Initial data for the diploma project: \_\_\_\_\_

The list of issues to be developed in the diploma project:

a) \_\_\_\_\_  
b) \_\_\_\_\_

c) issues of life safety and labor protection d) calculation of economic efficiency of the elaboration  
List of graphic material (with exact indication of required drawings): demonstrated slides of  
presenting the work

Recommended basic literature: from \_\_\_\_\_ names \_\_\_\_\_



**Appendix Ж**

Sample of the title page of Master's thesis

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTANNon-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"Institute  
(Institute name)

UDC 665.622.43.046.6-52 (043)

On the rights of the manuscript

---

*(full name of the trainee)***MASTER'S THESIS (PROJECT)**

for the academic Master's degree

Name of the thesis

Direction of training

---

—

---

*(code and name of the degree program)*

Scientific supervisor

---

*(academic degree, title)*

---

*signature*      *full name*  
«\_\_» \_\_\_\_ 20\_\_.

Reviewer

---

*(academic degree, title)*

---

*signature*      *full name*  
«\_\_» \_\_\_\_ 20\_\_.

Normcontroller

---

*(academic degree, title)*

---

*signature*      *full name*  
«\_\_» \_\_\_\_ 20\_\_.**ADMITTED TO DEFENSE**  
Head of Department

---

*(academic degree, title)*

---

*signature*      *full name*  
«\_\_» \_\_\_\_ 20\_\_.

Almaty 20\_\_

## Appendix I

Sample of the task for Master's thesis

### MINISTRY OF SCIENCE AND HIGHER EDUCATION REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(name of the institute)

Department \_\_\_\_\_  
(name of the department)

\_\_\_\_\_   
(code and name of the degree program)

#### APPROVED

Head of Department \_\_\_\_\_

\_\_\_\_\_  
(Department name)

\_\_\_\_\_  
(academic degree, title)

signature full name  
«\_\_» \_\_\_\_ 20\_\_.

#### TASK for executing the Master's thesis

To Master's student \_\_\_\_\_  
(full name of the trainee)

Theme \_\_\_\_\_  
(theme of Master's thesis)

Approved by the decree \_\_\_\_\_ #\_\_ dated «\_\_» \_\_\_\_ 20\_\_.  
(supervising vice-rector)

Deadline for submitting the completed dissertation " \_\_ " \_\_\_\_ 20\_\_.

Initial data for Master's thesis: \_\_\_\_\_

The list of issues to be developed in Master's thesis:

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) issues of life safety and labor protection d) calculation of the economic efficiency of the development
- e) appendices

List of graphic material (with exact indication of mandatory drawings):

Recommended basic literature:

For example:

1 Gasnikov A.V. Modern numerical optimization methods. Method of universal gradient descent. Moscow: MIPT, 2018. p.166.

2 Gavrilov V.A. On the method of continuous monitoring of the electrical resistivity of rocks //Seismic.instrumentation. 2013. Vol.49. # 3. pp.25-38.

**Continuation of Appendix I****SCHEDULE**  
of preparing the Master's thesis

<b>Name of sections, list of issues being developed</b>	<b>Deadlines for submission to the scientific supervisor</b>	<b>The note</b>

**Signatures**

of consultants and norm controller for the completed Master's thesis with indicating the relevant sections of dissertation

<b>Section names</b>	<b>Consultants, full name (academic degree, title)</b>	<b>Date of signing</b>	<b>Signature</b>
The economic part			
Labor protection			
Normcontroller			

Scientific supervisor

\_\_\_\_\_

*signature*

\_\_\_\_\_

*full name*

Task was accepted for execution by the trainee

\_\_\_\_\_

*signature*

\_\_\_\_\_

*full name*

Date

«\_\_\_\_» \_\_\_\_\_ 20\_\_\_\_

**Appendix K**

Sample of designing an explanatory note to the course project (work)

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

**EXPLANATORY NOTE**  
to the course project (work)

On the theme: «\_\_\_\_\_»  
(*the theme name*)

\_\_\_\_\_  
(*code and name of the degree program*)

Executed: \_\_\_\_\_  
(*full name of the trainee*)

Supervisor \_\_\_\_\_  
(*academic degree, title*)

\_\_\_\_\_  
*signature* *full name*  
«\_\_» \_\_\_\_ 20 \_\_\_\_.

Normcontroller

\_\_\_\_\_  
(*position*)

\_\_\_\_\_  
*signature* *full name*  
«\_\_» \_\_\_\_ 20 \_\_\_\_.

Almaty 20 \_\_\_\_

**Continuation of Appendix K**

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

**EXPLANATORY NOTE**

to the course project (work)

On the theme: « \_\_\_\_\_ »  
(*name of the theme*)

**Tool for measuring the performance of the course project (work)**

Quality of work performance	Rating range	Received %
1 Not completed Absence from classes without valid reasons	0%	
2 Student's performance and activity	0-50%	
3 Design of the project	0-20%	
4 The ability to use reference books, technical literature, educational and methodological complex of the discipline, lecture notes	0-5%	
5 Ability to use technical means	0-5%	
6 Defense of the course project	0-20%	
Total	<b>0-100%</b>	

Full name (of the trainee) \_\_\_\_\_

Code (of the degree program) \_\_\_\_\_

Full name (of the teacher) \_\_\_\_\_

Almaty 20\_\_\_\_

**Continuation of Appendix K****MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN**

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

\_\_\_\_\_  
(*code and name of the degree program*)

**TASK**

to complete the course project (work)

To the trainee \_\_\_\_\_  
(*full name of the trainee*)

Theme: \_\_\_\_\_  
(*theme of the course project (work)*)

Deadline for submitting the completed project / work «\_\_\_» \_\_\_\_\_ 20\_\_.

Initial data for the project / work: \_\_\_\_\_

Content of settlement and explanatory note (list of issues to be developed):

- a) \_\_\_\_\_;
- b) \_\_\_\_\_;
- c) \_\_\_\_\_;
- d) \_\_\_\_\_;

List of graphic material (with exact indication of mandatory drawings)

- a) \_\_\_\_\_;
- b) \_\_\_\_\_;

Recommended basic literature:

- 1 \_\_\_\_\_;  
(*Full name of the author. Name of literature – Place of publication. Publisher. Year*)
- 2 \_\_\_\_\_;
- 3 \_\_\_\_\_;

For example: 1) Hoffman V.E., Homonenko A.D. Delphi 6. – St. Petersburg: BHV-Petersburg, 2001.

2) Faronov V.V. Delphi. Programmer's Guide. – M.: Nolidzh, 2001.

3) Program description. USSD. GOST 19.402-78. – M: Publ. House of Standards, 1996.

**Continuation of Appendix K****SCHEDULE**

of preparation of the course project (work)

<b>Name of sections, list of issues being developed</b>	<b>Deadlines for submission to the supervisor</b>	<b>The note</b>

Head of Department

---

*signature*

---

*full name*

Project manager

---

*signature*

---

*full name*

Task was accepted for execution by the trainee

Date

«\_\_\_\_» \_\_\_\_\_ 20\_\_\_\_



**Appendix L**

Sample of designing the title page of laboratory work (semester work)

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

**LABORATORY WORK #**

On the theme: « \_\_\_\_\_ »  
(*the theme name*)

\_\_\_\_\_  
*code and name of the degree program*

Executed: \_\_\_\_\_  
(*full name of the trainee*)

Checked: \_\_\_\_\_  
(*position*)

\_\_\_\_\_  
*signature* *full name*  
« \_\_\_\_ » \_\_\_\_ 20 \_\_\_\_.

Almaty 20 \_\_\_\_

**Continuation of Appendix L**

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(Institute name)

Department \_\_\_\_\_  
(Department name)

**LABORATORY WORK # \_\_\_\_\_**

On the theme: « \_\_\_\_\_ »  
(the theme name)

**Laboratory work # performance measurement tool**

Quality of work performance	Rating range	Received %
1 Not completed Absence from classes without valid reasons	0%	
2 Student's performance and activity	0-50%	
3 Design of the project	0-20%	
4 The ability to use reference books, technical literature, educational and methodological complex of the discipline, lecture notes	0-5%	
5 Ability to use technical means	0-5%	
6 Defense of the course project	0-20%	
Total	<b>0-100%</b>	

Full name (of the trainee) \_\_\_\_\_

Code (of the degree program) \_\_\_\_\_

Full name (of the teacher) \_\_\_\_\_

Almaty 20 \_\_\_\_\_

**Appendix M**

Sample of designing the title page of the student's independent work (a typical graphical calculation, an abstract, a test paper, homework and practical work)

MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(*Institute name*)

Department \_\_\_\_\_  
(*Department name*)

**STUDENT'S INDEPENDENT WORK # \_\_\_\_**

On the theme: « \_\_\_\_\_ »  
(*the theme name*)

\_\_\_\_\_  
*code and name of the degree program*

Executed: \_\_\_\_\_  
(*full name of the trainee*)

Checked: \_\_\_\_\_  
(*position*)

\_\_\_\_\_  
*signature* \_\_\_\_\_ *full name*  
« \_\_\_\_ » \_\_\_\_\_ 20 \_\_\_\_.

Almaty 20 \_\_\_\_

**Continuation of Appendix M****MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN**

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

Institute \_\_\_\_\_  
(Institute name)

Department \_\_\_\_\_  
(Department name)

**STUDENT'S INDEPENDENT WORK # \_\_\_\_**

On the theme: « \_\_\_\_\_ »  
(the theme name)

**Tool for measuring the performance of the student's independent work # \_\_\_\_**

Качество выполнения работ	Rating rate	Received %
1 Not completed	0%	
2 Completed	0-50%	
3 Independent systematization of the material	0-10%	
4 Fulfillment of the required volume and within the specified period	0-5%	
5 Use of additional scientific literature	0-5%	
6 Uniqueness of the completed task	0-10%	
7 Defense of SIW	0-20%	
Total:	<b>0-100%</b>	

Full name (of the trainee) \_\_\_\_\_

Code (of the degree program) \_\_\_\_\_

Full name (of the teacher) \_\_\_\_\_

Almaty 20 \_\_\_\_

**Appendix N**

Sample of designing the title page of the practice report

**MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN**Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"Institute \_\_\_\_\_  
(*Institute name*)Department \_\_\_\_\_  
(*Department name*)**REPORT ON PRODUCTION/ PRE-GRADUATE PRACTICE**\_\_\_\_\_  
(*place of practice*)\_\_\_\_\_  
*code and name of the degree program*  
Executed: \_\_\_\_\_  
(*full name of the trainee*)Head of Company \_\_\_\_\_  
(*position*)\_\_\_\_\_  
*signature* \_\_\_\_\_ *full name.*  
«\_\_\_» \_\_\_\_\_ 20 \_\_\_\_.

P.S.

Head of University

\_\_\_\_\_  
(*position*)\_\_\_\_\_  
*signature* \_\_\_\_\_ *full name*  
«\_\_\_» \_\_\_\_\_ 20 \_\_\_\_.

Almaty 20 \_\_\_\_

**Continuation of Appendix N****MINISTRY OF SCIENCE AND HIGHER EDUCATION  
REPUBLIC OF KAZAKHSTAN**

Non-Profit Joint Stock Company "Kazakh National Research Technical University named after  
K.I. Satbayev"

**REVIEW – RATING OF THE REPORT**

Trainee \_\_\_\_\_  
(full name of the trainee)

Degree program \_\_\_\_\_  
Group \_\_\_\_\_  
Type of practice \_\_\_\_\_  
Department \_\_\_\_\_

Criteria, in the presence of at least one of which the work is assessed as unsatisfactory\*

1 Practice deadlines are not met	
2 Report volume is less than 15 pages	
3 Report structure is not observed (the report's content is not divided into component parts, there is no graphic material, there are no number of sections etc.)	
4 Report subject does not correspond to the report content	

**Note:** \* In the second column, the "+" sign is marked in case of detection of the given shortcomings.

**Report certification results**

1 Assessment of the practice head from Department (%)	
2 Assessment for the practice from Company (organization) (%)	
3 Assessment for defending the report before Commission (%)	
4 Final assessment for the practice (%)	

Chairperson of Commission \_\_\_\_\_  
(signature, full name)

Members of Commission \_\_\_\_\_  
(signature, full name)  
\_\_\_\_\_  
(signature, full name)  
\_\_\_\_\_  
(signature, full name)

«\_\_» \_\_\_\_\_ 20\_\_.

## Appendix P

### Sample of designing the list of the used literature

#### LIST OF THE USED LITERATURE

1 Law of the Republic of Kazakhstan "On standardization" dated October 5, 2018 # 183-VI RKL.

2 Law of the Republic of Kazakhstan "On amendments and additions to some legislative acts of the Republic of Kazakhstan on science" dated March 31, 2021 # 24-VII RKL.

3 Karibzhanov H., Amirkhanov Ye., Khamitov I. Standardization: textbook/edited by H.S. Karibzhanov. – Nur-Sultan: National Standardization Body, 2020. – p. 224.

4 GOST 1.2-2015 "Interstate standardization system. Interstate standards, rules and recommendations on interstate standardization. Rules for development, adoption, updating and cancellation" (ed. 1).

5 Lifshits I.M. Standardization, metrology and conformity assessment: textbook and workshop for universities / I. M. Lifshits. – 14<sup>th</sup> ed., reprint. and add. – Moscow: Yurayt Publishing House, 2022. – p. 423.

6 Baimakhanov G. A., Karazhanova D. D., Shingisova R. K. Methods of risk management of quality processes// Scientific and technical journal "SMART". – Astana, RSE "KazStandard", 2022. – #4(83). – pp. 56-51.

7 Greulich O.R., Jawad M.H. (eds.) Primer on Engineering Standards.  
/ O.R. Greulich, M.H. Jawad. – New.York: Wiley-ASME, 2018. – p.163.

8 Povetkin V. V., Kerimzhanova M. F., Ibragimova Z. A.,

Tatybayev M. K., Issayeva I. N. Substantiation of technological methods for increasing the durability of gears // International collection of scientific papers "Progressive technologies and systems of mechanical engineering". – Donetsk, 2015. – pp. 165-171.

9 Kovacic L. Chinese experience of artificial intelligence development: strategic approach. 07.20, <https://carnegiemoscow.org/2020/07/07/ru-pub-82172>.

10 Patent # 2305798 C1 RU F04D 1/04 Auger-centrifugal pump / Melnikov N. A., Poturoyev A. A., Filatov V. A., 09/10/2007.

11 Innovative patent of RK # 30468 F15B 15/22 Ground pump/ Povetkin V.V., Yermekbayeva A.O., Kerimzhanova M.F., Andryushenko Ye.S. Publ.15.10.2015, byul. # 10.

## Registration sheet on changes

Serial number of the change	The basis (link to the document)	Section, paragraph of the document	Type of the change (to replace, cancel, add)	The number and date of notification	The change was made	
					Date	Surname and initials, signature, position
αλ.	p. 4. i. 48		replace	αλ 19.02. 2024	19.02. 2024	Karazhanov P. for



**ORGANIZATION STANDARD**  
**QUALITY MANAGEMENT SYSTEM**

**EDUCATIONAL WORKS**

**GENERAL REQUIREMENTS FOR CONSTRUCTING, PRESENTING,  
DESIGNING AND THE CONTENT OF TEXTUAL AND GRAPHIC  
MATERIAL**

**ST KazNRTU – 09 – 2023**

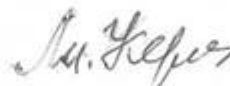
**Chair of the working group**

Head of Standardization,  
Certification and Metrology  
Department

D.Karazhanova

**Members of the working group**

Professor of Mechanical  
Engineering Department



M.Kerimzhanova

**Associate Professor of**  
Standardization, Certification and  
Metrology Department



G.Baimakhanov

**Associate Professor of**  
Technological Machines and  
Transport Department



A.Alpeyissov