MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL TECHNICAL UNIVERSITY
«KHARKIV POLYTECHNICAL INSTITUTE»

METHODOLOGICAL GUIDANCE

for bachelor's thesis for foreign students
at the specialty G9 Applied Mechanics

Kharkiv NTU «KhPI»
2025

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

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«ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

МЕТОДИЧНІ ВКАЗІВКИ

до виконання дипломної роботи першого (бакалаврського) рівня
для іноземних студентів
спеціальності G9 Прикладна механіка

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CONTENTS

Introduction…….. 6

1 General provisions …….. 7

2 Composition of the bachelor's thesis …… 11

2.1 Requirements for the completion of bachelor's thesis documents …….. 11

2.2 Title page ……... 11

2.3 Documents list ……... 11

2.4 Tasks for the bachelor's thesis …… 12

2.5 Explanatory note …… 12

2.5.1 Composition of the explanatory note……. 12

2.5.2 Title page of the explanatory note……. 13

2.5.3 Abstract ……. 13

2.5.4 Contents……. 14

2.5.5 List of designations and abbreviations……... 15

2.5.6 Introduction……..... 16

2.5.7 Main (technological) part..……. 16

2.5.8 Environmental impact assessment of the planned activity…….. 17

2.5.9 Economic part…….. 18

2.5.10 Conclusions ……. 18

2.5.11 References ……... 18

2.5.12 Appendices……... 19

3 Requirements for bachelor's thesis text presentation…… 20

3.1 General requirements…….. 20

3.2 Text structure ……. 20

3.3 Text elements…….. 22

3.3.1 Formulas and equations……. 22

3.3.2 Tables……. 24

3.3.3 Illustrations…… 27

3.3.4 Abbreviation…….. 28

3.3.5 Numbers and signs in the text…… 29

3.3.6 Units of physical quantities…… 30

3.3.7 Examples and notes……... 30

3.3.8 Footnotes…… 32
3.3.9 Links…….. 33
4 Requirements for bachelor's thesis presentation…….. 24
5 Requirements for compiling the bachelor's thesis documents……. 35
References…… 36
Appendix A Bachelor's thesis's title page in Ukrainian……... 37
Appendix B An example of documents list in Ukrainian…… 38
Appendix C Task for bachelor's thesis in Ukrainian ……... 39
Appendix D Explanation note for bachelor's thesis in Ukrainian……...….. 41
Appendix E Title page for diploma paper in English…….. 42
Appendix F Example of APA style for references…….. 43
Appendix G Example of table in bachelor's thesis …….. 48
Appendix H Title slide of presentation …….. 49

INTRODUCTION

Methodological guidelines for completing a first (bachelor's) level thesis for foreign students of the specialty G9 Applied Mechanics have been developed based on the STZVO-HPI-2.01-2025-2 standard, which establishes general requirements for the structure and procedure for the preparation, completion and defense of qualification theses for the first (bachelor's) and second (master's) levels of higher education at the National Technical University “Kharkiv Polytechnic Institute”.

1 GENERAL PROVISIONS

In accordance with the standard of higher education of the first (bachelor's level) specialty in Applied Mechanics, the qualification work should involve solving a complex specialized task or practical problem in applied mechanics, characterized by complexity and uncertainty of conditions, using theories and methods of mechanical engineering. The qualification work must not contain academic plagiarism, fabrication or falsification.

A bachelor's thesis mainly involves performing typical tasks related to professional activities. When completing their bachelor's thesis, students must demonstrate that they have acquired theoretical and/or practical knowledge, skills and abilities in their chosen specialization.

The purpose of the thesis project as the final stage of a student's university education is to systematize, consolidate and expand the knowledge they have acquired. Students must demonstrate a free command of the information and skills acquired during the implementation of the educational program in the specialty ‘Applied Mechanics’ and, ultimately, the correspondence of their professional level to the degree of Bachelor of Applied Mechanics. It is determined by the examination committee on the basis of the defense of the qualification work (bachelor's thesis or bachelor’s thesis). When completing their bachelor's thesis, students must demonstrate that they have acquired theoretical and/or practical knowledge, skills and abilities in their chosen specialization.

When starting to work on the qualification work, the student must systematize the materials collected during the pre-diploma internship and agree with the thesis supervisor on the content, scope and schedule of the project (work).

Topics must be relevant, correspond to the current state and prospects of science and technology development. Topic titles must be concise, clear and contain unambiguous interpretations. Topics for qualification works are reviewed annually at a department meeting and updated as necessary. Topics may be accepted at the request of employers. If necessary, topics may be adjusted or replaced. The title of the topic is reapproved by order of the rector on the basis of appropriate justification. Higher education applicants are given the right to choose the topic of their qualification work, as well as to submit a proposal for their own topic with the necessary justification for its

development. It is recommended that the topics of qualification works for higher education applicants studying on behalf of enterprises (organisations) correspond to the profile of these enterprises (organisations).

Each student has their own thesis supervisor, who is selected from among the appointed professors, associate professors, the most experienced senior lecturers of the Department of Mechanical Engineering, or from among the research staff of the higher education institution, as well as highly qualified specialists from enterprises (organizations). Thesis supervisors are approved by order of the rector.

Bachelor's thesis is carried out on the basis of an assignment. This assignment must be approved by the head of the department.

During the qualification work, the supervisor recommends the necessary sources of information to the candidate, including regulatory documents, conducts consultations as scheduled, provides necessary advice, and checks the implementation of the work schedule (by stages and as a whole).

A higher education student can perform qualification work both at a higher education institution and at enterprises, scientific, design and construction institutes, and other organizations.

If during the performance of qualification work there are force majeure circumstances (martial law, natural disasters, quarantine measures, etc.), when students' attendance at the university is limited or absent, all measures regarding the procedure for performance are carried out using remote technologies.

The completed qualification work, which has been approved for defense by the consultants of individual sections and the norm controller, is submitted by the applicant to the head of the department.

The head of the department assesses the readiness of the qualification work for defense on the basis of the completion of the task and the schedule and writes a review characterizing the work done by the higher education applicant.

Based on the approvals of the supervisor, consultants and norm controller, the head of the department decides on the admission of the qualification work for defense.

If the head of the department does not consider it possible to admit the higher education applicant to the defense of the qualification work, this issue is considered at a

meeting of the department with the participation of the supervisor. The minutes of the department meeting are submitted for approval to the director of the institute and then to the rector of the university.

Qualification work that has been admitted by the graduating department for defense is submitted for review.

The composition of reviewers from among specialists in production and scientific organizations is approved by the vice-rector on the basis of a submission from the relevant department. It is permitted to involve as reviewers teachers of the NTU ‘KhPI’ (professors, associate professors) who do not work in the department in question, or teachers from other higher education institutions.

In their conclusions, reviewers note the relevance of the topic of the development (research), its novelty, the specific personal contribution of the applicant to the results presented in the work, and the degree of justification of scientific (practical, organizational) provisions.

After receiving the review, the higher education applicant submits a complete electronic version of their qualification work to the department within the time frame established by the department's decision, but no later than 1 day before the deadline set according to the academic schedule of NTU ‘KhPI’, for further placement in the Electronic Repository of Qualification Theses of Higher Education Applicants at the National Technical University ‘Kharkiv Polytechnic Institute’.

The file format and file names of documents are formed in accordance with the Instructions on the technology of archiving in the electronic repository of qualification graduation works of higher education applicants at the National Technical University ‘Kharkiv Polytechnic Institute’.

The qualification work, together with the review and review or their electronic copies, shall be submitted to the examination committee for defense.

The examination committee may also be provided with materials or their electronic copies that characterize the scientific (creative) and practical value of the work performed (articles, methodological developments, conference abstracts, etc.).

After the defense, the qualification work or its electronic copy is stored in the university archive.

The measures listed above shall be implemented using remote technologies in force majeure circumstances. Other requirements for the defense of qualification works are set out in the ‘Procedure for the organization of current and semester control and certification of students using remote learning technologies at the National Technical University ’Kharkiv Polytechnic Institute".

2 COMPOSITION OF THE BACHELOR'S THESIS

2.1 Requirements for the completion of bachelor's thesis documents

In form, a qualification work (bachelor's thesis) is a set of documents. They can be textual and graphic.

The bachelor's thesis should generally contain the following documents:

1) title page;
2) documents list of the bachelor’s thesis;
3) task to complete the bachelor’s thesis;
4) explanatory note to the bachelor’s thesis;
5) design documents;
6) technological documents;
7) program documents;
8) posters and other illustrative materials (presentations).

Bachelor’s thesis documents for foreign students, who had training in English, must be executed in English. Only title pages are made in Ukrainian and also some of them or all can be made in English (if it is necessary for future student’s job).

2.2 Title page

A title page example of the bachelor’s thesis is given in the appendix A.

The bachelor’s thesis code, which is affixed on the title page, consists of: group index and the number of the topic by order. For example, МІТ-221дів.е.01.

2.3 Documents list

All documents completed in this bachelor’s thesis and submitted to the examination commission are recorded in the bachelor’s thesis documents list. The documents list form is given in Appendix B.

Documents are recorded in information by sections:

– "General documents";
– "Design documents";
– "Technological documents";

– "Program documents";
– "Posters";
– "Illustrative materials";
– "Scientific developments" (if available).

If the bachelor's thesis lacks any kind of documents, the section is excluded.

The first section "General documents" is mandatory. It writes down the task to perform the bachelor's thesis and an explanatory note to the bachelor's thesis.

If a presentation is used during the bachelor's thesis defense it is recorded in the "Illustrative materials" section.

The names of the sections are written in the column "Name of the document" in the form of a title and underlined.

2.4 Tasks for the bachelor's thesis

An example of the task implementation on the bachelor's thesis is given in Appendix C.

The task indicates the bachelor's thesis subject, the deadline for submission of the completed bachelor's thesis by the student; output data; concise content of the explanatory note; a list of graphic material; the task given date. The task also specifies the consultants of bachelor's thesis individual sections and the calendar plan for bachelor's thesis stages implementation.

2.5 Explanatory note

2.5.1 Composition of the explanatory note

The explanatory note to the bachelor's thesis is essentially a document that provides a report on the bachelor's thesis performance. An explanatory note is a text document of a scientific and technical nature. The explanatory note must contain the following structural elements in sequence:

1) title page;
2) abstract;
3) content;

4) a list of designations and abbreviations (if available);
5) introduction;
6) main (technological) part;
7) environmental impact assessment of planned activities;
8) economic part;
9) conclusions;
10) references;
11) appendix (if available).

The pages of the explanatory note are numbered with Arabic numerals, placing them in the upper right corner of the page without any signs. Page numbering should be end-to-end for the entire document. On the title page, the number is not put, but it is included in the general numbering.

The bachelor's thesis explanatory note volume (in English) should not exceed: by specialty – 100 pages (minimum volume - 50 pages); on economic justification – 10 pages; environmental impact assessment of planned activities – 10 pages.

The structural elements of the document "ABSTRACT", "CONTENTS", "LIST OF DESIGNATIONS AND ABBREVIATIONS", "INTRODUCTION", "CONCLUSIONS", "REFERENCES", "APPENDIX" must start on new pages. The names of the structural elements are their headings, which are placed symmetrically in the text. Headings are written in capital letters, not numbered, do not put a period at the end and do not underline.

2.5.2 Title page of the explanatory note

The title page is the first page of the explanatory note. It is included in the total number of pages, but the page number is not inserted. An example of the explanatory note title page to the bachelor's thesis is given in Appendix D, Appendix E.

2.5.3 Abstract

The abstract is a concise summary of the document text content, which contains the main information and conclusions necessary for the initial familiarization with the document. The abstract should contain: information about the scope of the document; list

of keywords; the text of abstract. It is recommended to separate these components from each other with a free line.

The length of the abstract should not exceed one page.

Information about the document volume includes: the number of pages of the document, the number of illustrations, tables, references and appendices. The record form is given in the example

Example

The diploma paper contains: 87 pages, 41 figures, 11 tables, 17 references, 3 appendixes

A keyword is a word or phrase from the text that are most relevant for information contained in a document. Generally accepted scientific and technical terms are used as keywords (see example)

Example

Keywords: PART, WORKPIECE, SHAFT, MANUFACTURABILITY, TECHNOLOGICAL PROCESS, MACHINING ALLOWANCES, CUTTING TOOL, MACHINE TOOL, BASE, FIXTURE, LAYOUT OF THE AREA, CAD/CAM/CAE SYSTEMS.

The text of the abstract should reflect the main content of the document, including such aspects as the object (subject), purpose, methods, results of research or development. The text of the abstract is not divided into points.

The abstract is performed in English. The pages of the abstract are not numbered and are not included in the total number of document's page.

2.5.4 Contents

The numbering of explanatory note pages begins with the number 2 on the table of contents.

In the general case, the following is written in the table of contents:

- list of designations and abbreviations;
- introduction;
- names of sections, subdivisions;
- conclusions;
- references;
- appendix.

The names of the sections and subsections are indicated together with their serial numbers, the appendices - with their designation and name. All names are written in lowercase letters with the first capital letter.

Numbers and names of subsections are given after a paragraph indent equal to two characters (0.5 cm) relative to the numbers of sections (subsections).

If it is necessary to continue recording the name of the section, subsection on the second (next) line, it is started at the level of this name beginning on the first line, and when continuing the recording appendix name - at the level of recording the appendix designation.

The pages numbers on which the names of the elements are placed indicate the last line level one below the other. The word "page" or its abbreviation is not written. The endings of elements headings are separated from the page numbers by punctuation (periods). Example of design - see "Contents" of these methodological guidance.

2.5.5 List of designations and abbreviations

If the text of the document uses conventions, abbreviations, symbols, units of measurement that are not provided for by current standards, as well as specific terminology, then their list should be presented in the form of a separate list.

The list should be arranged in a column, in which conventional designations, abbreviations, etc. are given in alphabetical order on the left, and their detailed interpretation is on the right.

The list is given in the following order: abbreviations (including abbreviations); conditional (letter) designations; symbols of chemical elements and compounds; unit of measurement; terms. For letter designations, the following order of entry is established: first, conventional designations of the English alphabet should be listed in alphabetical

order, then - Latin, and lastly - Greek.

Irrespective of the list existence, when the first designations (abbreviations) appearance in the text, their transcription should be provided.

2.5.6 Introduction

In the introduction, it is necessary to give a brief description of the current state of the scientific (technical) task (question) to which the work is devoted, outline global trends in solving the tasks set, note the relevance and expected results of the task of the topic being developed.

The introduction to the qualification work can include the purpose and objectives of the work, the object and subject of the research, elements of scientific novelty, practical significance, methods of scientific research, and approbation of the results of the work.

The introduction should not take more than 2 pages. The text of the introduction is not divided into paragraphs. The introduction cannot contain figures, tables, etc.

2.5.7 Main (technological) part

The main technological part of the thesis project is the central section, as it is here that the student demonstrates their ability to apply the knowledge they have acquired to solve practical engineering problems. When preparing this part, particular attention should be paid to the logical presentation, the validity of the choices made, and compliance with current trends in the development of mechanical engineering.

First of all, it is recommended to clearly formulate the goal of the technological development and define the design object. It is necessary to describe the purpose and design features of the product to be manufactured, as well as indicate its place in the overall production system. It is important to justify the choice of a specific part or assembly, highlighting the factors that affect the manufacturability of the design, its reliability and cost.

The next step is to analyse the initial documentation and standards applicable in the field of mechanical engineering. The technological part of the thesis should use design documentation, drawings and specifications, paying attention to tolerances, fits and surface quality requirements. It is recommended to demonstrate the ability to interpret

design solutions from a technologist's point of view, identifying potential difficulties in production and proposing ways to overcome them.

Particular attention should be paid to the choice of blank and the method of its production. It is important to consider various options (casting, stamping, rolling, welding, additive technologies) and justify the preferred method, taking into account the requirements for accuracy, strength, cost-effectiveness and productivity. The calculation of the blank mass and the material utilization coefficient should be included, which will demonstrate the ability to evaluate the effectiveness of the proposed solution.

The key section of the main technological part is the development of a route or operational technological process. It is recommended to describe the sequence of part processing in stages: from preparatory operations to final finishing and quality control. For each operation, it is necessary to specify the equipment, tools and fixtures used, cutting or welding modes, as well as measures to ensure accuracy and quality. It is advisable to accompany the description with diagrams of the part installation and sketches of the setup.

When selecting equipment, it is recommended to focus on modern automation tools and digital technologies, such as CNC machining centers, robotic complexes, automatic lines and monitoring systems. It is important to justify the effectiveness of using specific machines and installations in terms of productivity, flexibility, and integration into automated production. At the same time, the principles of lean manufacturing and sustainable development, minimization of energy consumption and waste should be taken into account.

2.5.8 Environmental impact assessment of the planned activity

The thesis may address issues related to ensuring safe working conditions during equipment operation and workplace organization in automated production. It is also important to analyses measures to reduce the impact of harmful factors (noise, vibration, dust, electrical safety) on workers' health. It is recommended that special attention be paid to issues of rational use of resources, waste disposal and reducing the negative impact of production on the environment.

2.5.9 Economic part

An important element of the technological part is the calculation of technical and economic indicators. Students must be able to assess the productivity of the developed process, the labour intensity of manufacturing a part, the cost of operations, and the cost price of the product. Based on the calculations, it is possible to compare alternative options and demonstrate the advantages of the chosen solution.. Also, other economic calculations based on the bachelor's thesis topic can be given here.

2.5.10 Conclusions

The conclusions should briefly state the work results and proposals for its use, as well as give technical and economic efficiency assessment of the work result and its implementation. In the conclusion of the main technological part of the thesis, it is necessary to draw conclusions about the compliance of the developed process with modern requirements of mechanical engineering production. For example, you can emphasize how the proposed solutions ensure quality improvement, cost reduction, production time reduction, and automation level improvement.

Conclusions should be concise. All conclusions must follow from the essence, correspond to the work purpose and tasks.

2.5.11 References

The list of information sources is drawn up in accordance with the requirements of STZVO- KhPI-3.01.

If there are own scientific developments, they are added to the list of sources of information if there are references to them in the text.

In the list of sources of information, the number of sources should not exceed 50 for a bachelor's thesis.

The language of the bibliographic description must correspond to the reference's language of the original information (title page, back of the title page, etc.). In the list of sources of information, the number of sources should not exceed 50 for a bachelor's thesis.

2.5.12 Appendices

Appendices can contain:

- additional illustrations or tables;
- materials that cannot be included in the main part due to the large volume or form of presentation (photos, intermediate mathematical proofs, instructions, methods, algorithms, calculation results, etc.);
- an additional list of sources to which there were no references in the text, but which may be of interest.

All appendices should be referenced in their respective sections. Appendices with their designation and name should be included in the table of contents.

Appendices are a continuation of the document, are placed from a new page, and have the same page numbering as the document. It is allowed to place two or more sequentially located applications on the same page, if they can be completely placed on this page. Appendices are marked consecutively with capital letters of the Latin alphabet, except for I and O. Letter designations are provided in alphabetical order without repetition and, as a rule, without gaps. For example, APPENDIX A, APPENDIX B.
If there is only one appendix, it is also marked as APPENDIX A. The word "APPENDIX _____" is placed symmetrically in the text.

The appendix must have a title, which is placed under the word "APPENDIX _" symmetrically to the text and executed in lowercase letters from the first capital letter. One free line should be left between the word "APPENDIX__" and the title. The text of each appendix can be divided into chapters, subsections, paragraphs and sub-paragraphs, which are numbered within the appendix. For example: A.3. . . (third section of appendix A).

Illustrations, tables and formulas are numbered within each appendix. If the appendix is divided into sections, then the numbering of illustrations, tables, and formulas should also be within the appendix. If there is one table, figure or formula in the appendix, they are also numbered. For example: Figure A.1 is the first figure of Appendix A.

Appendices can be copies of independent documents that do not differ from the original. In this case, a sheet should be placed in front of the copy, on which the word "APPENDIX ___" and its name are written in the middle. The pages of the copies are numbered, continuing the page numbering of the document.

3 REQUIREMENTS FOR BACHELOR'S THESIS TEXT PRESENTATION

3.1 General requirements

The explanatory note to the bachelor's thesis is drawn up in accordance with [6].

The explanatory note is made on A4 format (297×210 mm) sheets of printing paper. When creating tables, illustrations and appendices, it is allowed to use the A3 format (297x420 mm). A3 format sheet is hemmed into a document on a side of 297 mm and folded to A4 format.

Sheets must have margins: left, lower and upper – at least 20 mm, right – at least 10 mm.

The explanatory note text is written on one side of the sheet at intervals of one and a half, 14 pt font, 12 pt font is allowed for text elements (tables, notes, etc.), the recommended font is Times New Roman.

3.2 Text structure

Depending on its semantic content, the explanatory note text is divided into sections, if necessary - into subsections.

Sections and subsections are divided into points; points, if necessary, into sub-points. Items and sub-items can have lists.

Sections, subsections, clauses, subsections must have serial numbers.

The number is written from the paragraph in Arabic numerals. The height of the numbers should be equal to the height of the capital letters in the text. Do not put a period at the end of the number.

Sections should be numbered throughout the document (1, 2, 3, etc.). Subsections - within the section (1.1, 1.2, etc.); points - within the section (1.1, 1.2, etc.) or subdivision (1.1.1, 1.1.2, 1.1.3, etc.); subsections - within the clause (1.1.1.1, 1.1.1.2, 1.1.1.3, etc.).

If a section or subsection consists of one clause, or a clause consists of one subsection, they are not numbered.

If an element of a higher level of subordination has information related to all elements of a lower level, then this information is placed immediately after the title of the

structural element of a higher level and is not numbered. This information should not exceed 5-7 sentences.

Lists in the text are indicated in one of the ways:

- Arabic numbers with brackets;
- lowercase letters of Latin alphabet with a parenthesis (except for the letters i, o);
- with a hyphen.

A colon is placed after the word preceding the lists. The text of the lists together with the notation begins with a paragraph and is executed in lowercase letters, a semicolon is placed at the end of the lists (except for the last one, after which a period is placed). The second (subsequent) lines of the lists should start from the border of the field.

Further detailing of the lists is allowed (second level). In this case, they are recorded from the paragraph relative to the lists of the first level.

Example

The chemical composition and structure of 12X2H4A steel includes:

a) Si - from 0.17 to 0.37;
b) Ni - from 3,25 to 3,65;
c) S to about 0.025;
d) P up to 0.035;
e) Mn - 0.3-06;
f) Cr - 1.25 to 1.65;
g) C - 0,09-0,15;
h) Cu - 0.3;
i) Fe - 93%.

If the lists consist of several complete phrases, they are marked with Arabic numerals without brackets and periods, begin with a capital letter and are separated from each other by a period.

Example

The process of radial-axial method consists of two stages:

1) precipitation of the heated bar, pre-forming of the blank and piercing of the hole;

2) rolling to final size on a rolling mill.

Sections and subsections must have headings. Clauses and sub-clauses can also have headings if necessary. Headings (names) of sections, subsections, points, subsections should reflect their content and be short and precise. Do not put a period at the end of the title. If the title consists of two sentences, separate them with a period. Shifting of words in headings is not allowed.

Headings of sections are written in capital letters in bold and placed symmetrically in the text. It is allowed to place section headings from a paragraph.

Headings of subdivisions, clauses and sub-clauses are written in small letters with the first capital letter in bold type and are arranged from a paragraph.

One free line (21 pt.) must be left between the section title and the subsection title or the following text. Between the title of the subdivision and the title of the item, as well as between the title of the subdivision (item, sub-item) and the following text, the interval should be the same as in the text.

One free line (21 pt.) must be left between the previous text and the title of the section or subsection. Between the previous text and the item title (sub-item), the interval should be the same as in the text.

It is recommended to start each section of the explanatory note on a new page. It is not allowed to place the heading of a section, subsection, item or sub-item at the bottom of the page if only one line of text is placed after it.

3.3 Text elements

Elements of the text are: formulas and equations; tables; illustrations; abbreviation; numbers and signs; units of physical quantities; examples; notes; link.

3.3.1 Formulas and equations

Formulas are placed along the text or in separate lines.

Simple formulas are placed in the text, and basic formulas used in calculations and

research are placed in separate lines. Only one formula can be placed in one line. Formulas are placed symmetrically to the text; leave one free line above and below each formula. Spacing between formulas that follow each other should be as in the text.

It is allowed to transfer the continuation of the formula to the next line only on the signs of the performed operations, and the signs at the beginning of the next line are repeated. When transferring to multiplication operations, the sign (×) is used. Formulas that follow one another are separated by a comma. A period is placed at the end of the formula, which is the sentence end.

Quantities signs explanation and numerical coefficients, if they are not explained earlier in the text, should be given directly under the formula on a new line from the paragraph starts with word "where" without a colon in the sequence in which they are given in the formula; a comma is placed after the formula. The spacing between the formula and the explanation and between the explanation and the subsequent text should be the same as in the text.

If it is necessary to indicate the numerical value of the quantity, then it is recorded after decoding.

Example

Calculation of the coefficient of machining surfaces:

$$К_{MS} = 1 - \frac{S_M}{S}, \quad (3.1)$$

where S_M – surfaces to be machined;

S – total number of surfaces in part.

It is not allowed to write the signs of physical quantities units next to the formula expressing the dependence between the quantities in letter form:
correct: V = s/t; incorrect: V = s/t, m/s.

The letters of the units included in the product are separated by a dot on the middle line, as a multiplication sign.

Example

N m; A · m^2.

Formulas can be numbered. Only the main calculation formulas and formulas to which a reference must be made should be numbered. The numbering of the formulas should be within the section (see formula 3.1).

When transferring the formula to the next line (page), the number is indicated at the level of the last line.

3.3.2 Tables

For ease of presentation and text reading, digital and other indicators are recommended to be drawn up in the form of a table. All tables should be referenced in the text. Tables must be numbered. They are numbered within the section.

The number is written after the word "Table", the entry is made above the table on the left side. The table can have a name that should reflect the table content and be short. It is written after the number through a dash with lowercase letters from the first capital. The table header must be separated by a line from the rest of the table. If necessary, it is allowed to include a line for numbering the graph with Arabic numerals under the head of the table. The table rows height should be at least 8 mm. Diagonal lines are not allowed to separate the headings and subheadings of the sidebar and graph.

It is recommended to leave one free line at the top and bottom of the table.

Depending on its size, the table can be placed: after the text in which it is mentioned; on a separate next page; in the appendix to the document text. It is allowed to place the table along the long side of the sheet. If the table rows or columns exceed the page format, it is divided into parts, placing one part under the other, or transferred to the next page. The table is drawn up as shown in fig. 3.1. and Appendix G.

In each part, its head and side are repeated or replaced by a line with the numbers of the graphs (columns), which are indicated in the table's first part. At the same time, the word "Table", its number and name are placed only above the first part of the table, and above the other parts on the left side it is indicated: "Continuation of table ", and above the last part - "End of table ".

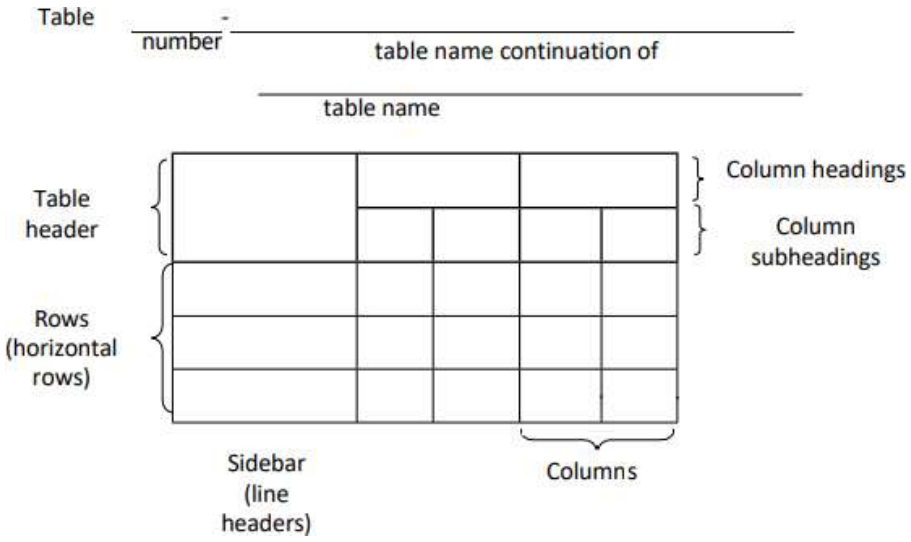


Figure 3.1 – Table's performance

If, when dividing the table into parts, the table is interrupted from the bottom, then in the first part of the table, the lower limiting horizontal line may not be drawn, (as at fig. 3.2).

Table._____- Parameters of washers...

In millimetres

Nominal thread diameter of bolt, screw, stud	Inner diameter of the washer	Washer thickness					
		light		normal		heavy	
		s	b	s	b	s	b
2,0	2,1	0,5	0,8	0,5	0,5	0,6	0,6
2,5	2,6	0,6	0,8	0,6	0,6	0,8	0,8
3,0	3,1	0,8	1,0	0,8	0,8	1,0	1,0

End of table _____

In millimetres

Nominal thread diameter of bolt, screw, stud	Inner diameter of the washer	Washer thickness					
		light		normal		heavy	
		s	b	s	b	s	b
4,0	4,1	0,8	1,2	1,0	1,0	1,4	1,4
…	…	…	…	…	…	…	…
48,0	48,5	7,0	12,0	-	10,0	-	-

Figure 3.2 – Dividing table in several parts

Tables with a small graphs number can be divided into parts and placed one part next to the other, separating them with a thick line, while the table head is repeated (as at fig. 3.3).

Table.

The diameter of the crane rod of the saw part, mm	Weight of 1000 pcs of steel washers, kg	Diameter of the fastener rod, mm	Weight of 1000 pcs of steel washers, kg
1,1	0,045	2,0	0,192
1,2	0,048	2,5	0,350
1,4	0,111	3,0	0,552

Figure 3.3 – Example of table with small graphs number

If it is necessary to explain individual data given in the table, then these data should be marked with a superscript footnote. Footnotes to the table are drawn up in accordance with paragraph "Footnotes".

If the table has footnotes and notes, then at the table end, the footnotes are given first, and then the notes.

Graphs and rows headings of the table should be written with a capital letter. Subheadings are written in lowercase if they form one sentence with the title, and in uppercase if they have an independent meaning. Do not put a period at the headings end and subheadings of tables. Graph headings and subheadings are written in the singular.

Graphs headings, as a rule, are written parallel to the table rows. If necessary, a perpendicular arrangement of graph headers is allowed.

If it is necessary to number indicators, parameters or other data, serial numbers should be indicated in the first table column (side) immediately before their name. Serial numbers are not placed before numerical values of quantities and designations of types, brands, etc.

Designations of physical quantities (indicators, parameters) are indicated in the side of the table after their names separated by a comma.

Text repeated in columns (in the absence of horizontal lines) is allowed:

- replace with quotation marks if it consists of one word;
- replace with the words "the same", if it consists of two or more words, at the first repetition, and then with quotation marks;
- replace with the words "the same" with the addition of extra information, if only part of the phrase is repeated;
– specify the value of the parameter once (at the level of the middle row), if it is the

same for several rows.

It is not allowed to put quotation marks instead of repeating numbers, brands, signs, mathematical and chemical symbols. If digital or other data are not indicated in the graphs, it is necessary to put a dash.

3.3.3 Illustrations

To explain the text being taught, it is allowed to illustrate it with diagrams, schemes, drawing, photographs, etc. Illustrations placed in the text should have the caption "Figure". All figures must be referenced in the text.

The execution of drawings and diagrams, which are illustrations, must meet the requirements of the Unified system of design documentation (ESKD) standards.

As a rule, a figure should be placed after the first mention of it in the text. The figure is placed symmetrically to the text. It is recommended to leave one free line at the top and bottom of the picture. If there are several figures in the section, it is allowed to place them in the order of numbers at the section end or make them in the form of appendices.

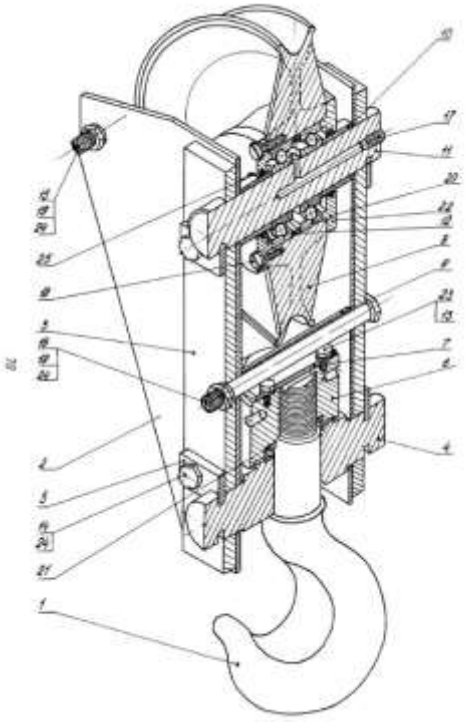
Figures must have serial numbers and may have names and explanatory data (subfigure text).

Numbering of figures should be within the section boundaries.

The figure name should reflect the figure content and be concise. It is placed symmetrically with a drawing after the number through a dash and is performed with lowercase letters starting with the first capital. The word "Figure" should be written in full.

The sub-figure text is placed above the name of the figure, as shown in fig. 3.4.

If the drawing is placed on several pages, then on the first page is placed the entry "Figure " and its name (if available), on the following pages - "Continuation of figure ", and on the last - "End of figure ". The accompanying text is placed on the page where it is necessary.



1 – hook; 2 – cheeks; 3 – supports; 4 – crossbar; 5 – central brackets; 6 – nut; 7 – plate; 8 – block; 9 – spacer bushings; 10 – bushings; 11 – axle; 12 – ring; 13 – bolts; 14 – bolt; 15 – bolt; 16 – bolt; 17 – screw; 18 – screws; 19 – nuts; 20 – covers; 21 – bearing; 22 – bearings; 23 – washers; 24 – sealing rings.

Figure 3.4 – Lifting hook

If a reference to a picture is followed by a review of the illustrated material, then the word "figure" is written without a number in the story. For example: "As can be seen from the figure...".

3.3.4 Abbreviation

As a rule, words in the text cannot be abbreviated. An exception is abbreviations of words and phrases established in the relevant state standards or generally accepted in the language in which the document is drawn up.

Abbreviations of words and phrases characteristic of a certain industry or activity field (use of highly specialized terms) are allowed. The following abbreviations are recorded in one of the following ways: directly in the text (in brackets after the full name at the first mention), if each of them is repeated no more than 3-5 times, for example: "Sanitary and protective zone (SPZ)", or in the list of designations and contractions (with

more repetitions).

If the name consists of several words, it is recommended to write it in abbreviated form when it is repeatedly mentioned in the text. For this, when mentioning the full name, write "further" and its accepted abbreviation in parentheses. For example: "Drying oven (further - oven)".

The words maximum and minimum are used in abbreviated form only for indices. For example: Umax, Umin. In the text, these words should be written in English: maximum, minimum.

3.3.5 Numbers and signs in the text

Abstract numbers up to nine are written in words, more than nine in numbers. Numerical values of physical quantities with units of measurement must be written in numbers.

Examples

1 Five soil samples were taken.

2 15 tests were conducted.

3 Pipe 1 m long; mass – 8 kg.

4 The cost of one meter is 6$.

Fractional numbers are written only in numbers in the form of decimal fractions, except for dimensions in inches, which should be written in the form: 3/4″

If the numerical value cannot be expressed in the form of a decimal fraction, then it is allowed to write it as a simple fraction in one line through a slash.

Example:

$$5/32;$$

$$(50a - 4c) / (4b + 20).$$

Ordinal numerals are written with numbers accompanied by shortened case endings.

Example:

2^{nd} line; 5^{th} part.

Dates are written without case endings.

Example:

March, 8; June, 28, but: in the 40s; the 70s.

Case endings are not written with Roman numerals.

Example:

at the XX Olympic Games, XXI century.

When specifying limiting norms, the words: "no less" or "no more", "from", "to", "over" are written before numerical values.

Example:

The coating thickness is no more than 0.2 mm.

When specifying a range of values, it is recommended to use a dash or a backslash "from ... to".

Example:

Coating thickness 0.2–0.5 mm; sizes from 30.0 to 50.0 mm.

For values with units of measurement "%", "°C", "°", the range of values should be written as follows: 65%–70% or using the inversion "from ... to".

The return "from ... to" must be used if the range of values contains negative values.

Example:

From minus 5 °C to plus 8 °C. From – 10 °C to + 6 °C.

In the text, it is not allowed to use without numerical or letter values:

– mathematical signs: – (minus); > (more); < (less); ≥ (greater than or equal to); ≤ (less than or equal to); = (equal); ≠ (not equil); 0 (zero); log (logarithm); sin (sine); cos (cosine), etc.;

– signs: # (number); % (percentage); °C (degrees Celsius); ∅ (diameter), etc. The signs "#", "%" and "°" are not doubled when indicating a plural number.

3.3.6 Units of physical quantities

In the text, values should be expressed in units:

– SI (basic, additional, derived), decimal, multiple;

– admissible for use along with SI units.

The use, designation and writing of physical quantities units must comply with ISO 80000-1:2009; ISO 80000-1:2009/Cor.1:2011 Quantities and units – Part 1: General.

The use of different systems for the same unit of physical quantity in the text document is not allowed.

3.3.7 Examples and notes

Notes are given if necessary explanations or reference data to the text, tables or illustrations content

Notes are placed immediately after the text, illustration or table to which they relate. Notes to the table are placed above the line marking the table end, and are separated from the main part of the table by a thin solid line.

Notes are made with minimal line spacing.

The word "Note" is printed in the 12-point font of the paragraph with a capital letter and is not underlined. A period is placed after the word "Note" and the text of the note is provided in capital letters on the same line. One note is not numbered, for

example:

Note. _____

If there are several notes, they are numbered with Arabic numerals without a period. In this case, write the word "Notes", put a colon after it and from a new line of the paragraph with a capital letter together with the serial number give the text of the note text, for example:

Notes:

1 _____

2 _____

Examples are given in those cases when they explain the document text content or contribute to its more concise presentation.

Examples are placed immediately after the text that needs explanation. The words *"Example"*, *"Examples"* are written in italics and placed on a separate line from the paragraph without punctuation marks. If the text of the example is placed on the same line as the word "Example", then the word "Example" is followed by a period. If there are several examples, they are numbered in the same way as notes.

3.3.8 Footnotes

If it is necessary to explain individual data in the text or table, it is allowed to use footnotes.

Footnotes are marked with superscripts. The footnote sign is made with Arabic numerals with a bracket and placed at the level of the upper edge of the font. For example, "...pressing unit [3)]...".

It is allowed to mark footnotes with asterisks (*) instead of numbers. The use of more than four stars is not allowed.

The footnote sign is placed immediately after the word, number, symbol, sentence to which the explanation is given, as well as in the footnote itself before the explanation text. Footnotes related to the text are placed from the paragraph at the page end on which they are marked, and are separated from the text by a short thin horizontal line up to 40 mm long on the left side. Footnotes related to table data are placed above the line that marks the table end and are separated from the main part of the table by a thin solid line.

Numbering of footnotes is separate for each page and table.

The text of the footnote is executed with a minimum interline interval in 12p font.

3.3.9 Links

The document may contain links to: for this document; on standards, technical conditions and other documents.

When referring to a section, subdivision, item, sub-item or list of this document, it should be written: "...according to section 3..."; "...according to 3.1..."; "... in accordance with 4.2.2..."; "... specified in list 2) 4.1.4...".

References to tables, illustrations, formulas and appendices of this document are given as follows:

- "... given in table 2.4";
- "... presented in table 6.1";
- "... according to figure 3.2..." or "... from fig. 3.2" ;
- "... shown in figure 3.4" or "... shown in fig. 3.4"
- "... in formula (2.1)..."; "... as can be seen from formula (2.1)...";
- "... presented in Appendix A"; "… given d in Appendix A." For repeated references, write:
- "... see table 6.1";
- "... see figure 2.4" or "... see Fig. 2.4";
- "... see formula (2.1)".

References to sources of information of this document are indicated in the text by serial numbers in square brackets as follows: "... in works [3, 4]..."; "... [7, table 34, p. 98]…"; "... [5, p. 18] ...".

The serial number of the source is given as the reference to it appears in the text. With repeated references to the same source, its number is repeated. When referring to standards and technical conditions in the text, it is allowed to submit only their designation without the year of approval. When referring to other regulatory documents, it is necessary to indicate their designations and names.

4 REQUIREMENTS FOR BACHELOR'S THESIS PRESENTATION

Illustrative materials are performed in electronic form (presentation), while the presentation of such elements as numbers and signs, units of physical quantities, formulas, tables, drawings, etc. must meet the requirements of STZVO-KhPI-3.01.

Illustrations of the explanatory note materials, as well as the results of execution of design, technological and program documents may be involved in the presentation. The presentation should be printed on sheets of white paper in A4 format and have a title page (pages). Title page (pages) of presentation must indicating the bachelor's thesis topic, student's name and group, supervisor's name and position (see Appendix H) and made both in Ukrainian and English.

The printed presentation should be hemmed at the explanatory note end.

The presentation can be made with Powerpoint, Google slides, or Keynote slides or another program. Make sure to prepare an appropriate number of slides. A general rule is to use about 10-15 slides for a 10-minute presentation. You can prepare your slides by using information from your thesis' first chapter (the overview of your thesis) as a framework or outline. Substantive information in your thesis should correspond with your slides.

Make sure your slides are of good quality – both in terms of the integrity of the information and the appearance. Do not use photo as background of slides, choose correct colors for background and words. Use figures, drawings, schemes of high quality.

5 REQUIREMENTS FOR COMPILING THE BACHELOR'S THESIS DOCUMENTS

Bachelor's thesis documents: title page, list of documents, task and explanatory note (in this order) should be folded into the cover.

Bachelor's thesis documents made on A4 and A3 format sheets, if there are no references to them in the text (for example, technological process, specification), can be placed after the explanatory note (they are not appendices).

Scientific developments - copies of articles and patents, abstracts of reports of scientific-technical and scientific-practical conferences, symposia, congresses, etc. should be hemmed at the end of the explanatory note.

REFERENCES

1 Дипломні проєкти та дипломні роботи. Загальні вимоги до виконання [Текст] : СТЗВО-ХПІ-2.01-2025 ССОНП – Чинний з 26.02.2025 р. – Х.: НТУ«ХПІ», 2025. – 47 с.

2 Бібліографічний запис. Бібліографічний опис. Загальні вимоги та правила складання [Текст] : ДСТУ ГОСТ 7.1:2006 : (ГОСТ 7.1–2003, IDT). – Чинний з 2007–07–01. – К., 2007. – 58 с. – (Система стандартів з інформації, бібліотечної та видавничої справи) (Національний стандарт України).

3 Упровадження в практику роботи бібліотек освітянської галузі ДСТУ ГОСТ 7.1:2006 «Бібліографічний запис. Бібліографічний опис. Загальні вимоги та правила складання» та ДСТУ ГОСТ 7.80:2007 «Бібліографічний запис. Заголовок. Загальні вимоги та правила складання» : практ. посіб. / НАПН України, Держ. наук.-пед. б-ка України ім. В. О. Сухомлинського ; [уклад.: І. Г. Лобановська, О. Г. Помчалова, 1. С. Хибник, ; наук. ред. І. Г. Лобановська]. – К., 2010. – 95 с.

4 Текстові документи у сфері навчального процесу. Загальні вимоги до виконання [Текст] : СТЗВО-ХПІ-3.01-2025 ССОНП. – Чинний з 26.02.2025. – Х. : НТУ«ХПІ», 2021. – 47 с.

APPENDIXA

Bachelor's thesis's title page in Ukrainian

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

НАВЧАЛЬНО-НАУКОВИЙ ІНСТИТУТ МЕХАНІЧНОЇ ІНЖЕНЕРІЇ І ТРАНСПОРТУ
Кафедра Технологія машинобудування та металорізальні верстати
Спеціальність 131 Прикладна механіка
Освітня програма Прикладна механіка
Спеціалізація 131-03 «Технологія автоматизованого виробництва»

До захисту допускаю
Завідувач кафедри
проф. Пермяков О.А.
(ініціали та прізвище)

(підпис, дата)

ДИПЛОМНИЙ ПРОЕКТ
першого (бакалаврського) рівня вищої освіти

Тема проєкту Проект дільниці механічного цеху з виробництва деталі "Зубчасте колесо" для МСП

Шифр проекту МІТ –220ів.е, 01
(група, номер теми за наказом)

Виконавець АБУ ЗЕІД Хуссейн
(прізвище, ім'я, по-батькові)

Керівник доцент, ІВАНОВА Марина Сергіївна
(посада, прізвище, ім'я, по-батькові)

Харків 2024

APPENDIX B

An example of documents list in Ukrainian

Назва виробу, об'єкта або теми	Назва документа	Фор-мат	Кільк арк.	При-мітка
	Документи загальні			
	Завдання на ДП	А4	1	
	Пояснювальна записка до ДП	А4	74	
	Ілюстративні матеріали			
The project of a mechanical work-	Презентація			
area of production a part "Spur				
gear" for SMEs.		А4	16	

МІТ –220іве, 01 131.03 00 000 ВД

Зм	Лист	Докум	Підпис	Дата
Розроб.		Абу Зеід Хуссейн		
Перевір.		Іванова М.С.		
Т.контр				
Н.контр.		Іванова М.С.		
Затверд.		Пермяков О.А.		

The project of a mechanical workshop area of production a part "Spur gear" for SMEs. Проект дільниці механічного цеху з виробництва деталі "Зубчасте колесо" для МСП.

Відомість документів

Літера			Лист	Листів
Д	П	Б		1

НТУ"ХПІ"
Кафедра ТММВ

APPENDIX C

Task for bachelor's thesis in Ukrainian

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

НАВЧАЛЬНО-НАУКОВИЙ ІНСТИТУТ МЕХАНІЧНОЇ ІНЖЕНЕРІЇ І ТРАНСПОРТУ

Кафедра Технологія машинобудування та металорізальні верстати

Рівень вищої освіти перший (бакалаврський) рівень

Спеціальність 131 Прикладна механіка
(шифр і назва)

Освітня програма Прикладна механіка

Спеціалізація 131-03 «Технологія автоматизованого виробництва»
(шифр і назва)

ЗАТВЕРДЖУЮ
Завідувач кафедри
проф. Пермяков О.А.

«_____» _____2024 року

ЗАВДАННЯ
ДО ДИПЛОМНОГО ПРОЕКТУ (РОБОТИ) СТУДЕНТУ

АБУ ЗЕІД Хуссейн
(прізвище, ім'я, по батькові)

1. Тема проекту (роботи) The project of a mechanical workshop area of production a part "Spur gear" for SMEs. Проект дільниці механічного цеху з виробництва деталі "Зубчасте колесо" для МСП.

керівник проекту (роботи) ІВАНОВА Марина Сергіївна, доцент
(прізвище, ім'я, по батькові, науковий ступінь, вчене звання)

затверджені наказом вищого навчального закладу від 16.04.2024 р. № 692 СТ

2. Строк подання студентом проекту (роботи) 10.06. 2024 р.

3. Вихідні дані до проекту (роботи) Креслення деталі «Зубчасте колесо». Звіт за переддипломну практику. Науково-технічна література та галузеві джерела інформації. Нормативні документи, довідники.

Figure C. 1 – Front side of task page

4. Зміст розрахунково-пояснювальної записки (перелік питань, які потрібно розробити)
Characteristics and analysis of the object of production; the choice of type and method of manufacturing the workpiece; design of the technological process of machining of a detail " Spur gear "; determination of allowances for machining; design of the mechanical shop area; organizational and economic part; labor and environmental safety.

5. Перелік графічного матеріалу (з точним зазначенням обов'язкових креслень)
Presentation (Illustrative material) The project of a mechanical workshop area of production a part "Spur gear" for SMEs.

6. Консультанти розділів проекту (роботи)

Розділ	Прізвище, ініціали та посада консультанта	підпис, дата	
		завдання видав	завдання прийняв
Економічна оцінка й обґрунтування.	доц. Гаврись О. М.	15.05.2024	09.06.2024
Охорона праці, навколишнє середовище.	доц. Ільїнська О.І.	17.05.2024	09.06.2024

7. Дата видачі завдання 16.02. 2024 р.

КАЛЕНДАРНИЙ ПЛАН

№ з/п	Назва етапів дипломного проєкту (роботи)	Строк виконання етапів проєкту	Примітки
1	Characteristics and analysis of the object of production	20.04.2024	
2	Choice of type and method of manufacturing the workpiece	24.04.2024	
3	Technological process design	30.04.2024	
4	Determination of allowances for machining	03.05.2024	
5	Calculation of cutting conditions and operational time	10.05.2024	
6	Analysis of schemes for basing parts at the machine	15.05.2024	
7	Design of the mechanical shop area	20.05.2024	
8	The organizational and economic part	30.05.2024	
9	Occupational safety and the environment	30.05.2024	
10	Making an explanatory note	05.06.2024	
11	Preparation of graphic documents (presentation)	05.06.2024	
12	Preliminary defense of the project	10.06.2024	

Студент _____ АБУ ЗЕІД Хуссейн
(підпис) (прізвище та ініціали)

Керівник проєкту _____ ІВАНОВА М.С.
(підпис) (прізвище та ініціали)

Figure C. 1 – Back side of task page

Appendix D

Explanation note for bachelor's thesis in Ukrainian

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

НАВЧАЛЬНО-НАУКОВИЙ ІНСТИТУТ МЕХАНІЧНОЇ ІНЖЕНЕРІЇ І ТРАНСПОРТУ

Кафедра Технологія машинобудування та металорізальні верстати

Спеціальність 131 Прикладна механіка
Освітня програма Прикладна механіка
Спеціалізація 131-03 «Технологія автоматизованого виробництва»
(шифр і назва)

ПОЯСНЮВАЛЬНА ЗАПИСКА
до дипломного проекту (роботи)
першого (бакалаврського) рівня вищої освіти
(освітньо-кваліфікаційний рівень)

на тему The project of a mechanical workshop area of production a part "Spur gear" for SMEs. Проект дільниці механічного цеху з виробництва деталі "Зубчасте колесо" для МСП.

Виконав студент 4 курсу, групи МІТ –220ів.е
Хуссейн АБУ ЗЕІД
(підпис) (прізвище та ініціали)

Керівник Марина ІВАНОВА
(підпис) (прізвище та ініціали)

Рецензент
(підпис) (прізвище та ініціали)

Нормоконтроль Марина ІВАНОВА
(підпис) (прізвище та ініціали)

Харків 2024 року

Appendix E

Title page for diploma paper in English

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL TECHNICAL UNIVERSITY
"KHARKIV POLYTECHNIC INSTITUTE"

INSTITUTE OF EDUCATION AND SCIENCE IN MECHANICAL ENGINEERING AND TRANSPORT

Department of Mechanical Engineering Technology and Metal-Cutting Machines

Specialty 131 Applied Mechanics

Educational program Applied Mechanics

Specialization 131-03 "Technology of automated production"

Project is allowed to be defended
by the signature of the
Head of the department
prof. A.A. Permyakov
(initials and surname)

_____
(signature, date)

GRADUATE PROJECT

the first (bachelor) level of high education

Theme of project The project of a mechanical workshop area of production a part "Spur gear" for SMEs.

Code of project MIT –220ів.е, 01
(group, topic number by order)

Executant ABOU ZEID Hussein
(Full Name)

Tutor of project associate professor, IVANOVA Maryna Serhiivna
(position, Full Name)

Kharkiv 2024

APPENDIX F

Example of APA style for references

Articles

References to periodical articles must include the following elements: author(s), date of publication, article title, journal title, volume number, issue number (if applicable), and page numbers.

Journal article, one author, accessed online

Ku, G. (2008). Learning to de-escalate: The effects of regret in escalation of commitment. Organizational Behavior and Human Decision Processes, 105(2), 221-232. doi:10.1016/j.obhbachelor's thesis.2007.08.002

Journal article, two authors, accessed online

Sanchez, D., & King-Toler, E. (2007). Addressing disparities consultation and outreach strategies for university settings. Consulting Psychology Journal: Practice and Research, 59(4), 286-295. doi:10.1037/1065- 9293.59.4.286

Journal article, more than two authors, accessed online

Van Vugt, M., Hogan, R., & Kaiser, R. B. (2008). Leadership, followership, and evolution: Some lessons from the past. American Psychologist, 63(3), 182-196. doi:10.1037/0003-066X.63.3.182

Article from an Internet-only journal

Hirtle, P. B. (2008, July-August). Copyright renewal, copyright restoration, and the difficulty of determining copyright status. D-Lib Magazine, 14(7/8). doi:10.1045/july2008-hirtle

Journal article from a subscription database (no DOI)

Colvin, G. (2008, July 21). Information worth billions. Fortune, 158(2), 73-79. Retrieved from Business Source Complete, EBSCO. Retrieved from http://search.ebscohost.com

Magazine article, in print

Kluger, J. (2008, January 28). Why we love. Time, 171(4), 54-60.

Newspaper article, no author, in print

As prices surge, Thailand pitches OPEC-style rice cartel. (2008, May 5). The

Wall Street Journal, p. A9.

Newspaper article, multiple authors, discontinuous pages, in print

Delaney, K. J., Karnitschnig, M., & Guth, R. A. (2008, May 5). Microsoft ends pursuit of Yahoo, reassesses its online options. The Wall Street Journal, pp. A1, A12.

Books

References to an entire book must include the following elements: author(s) or editor(s), date of publication, title, place of publication, and the name of the publisher.

No Author or editor, in print

Merriam-Webster's collegiate dictionary (11th ed.). (2003). Springfield, MA: Merriam- Webster.

One author, in print

Kidder, T. (1981). The soul of a new machine. Boston, MA: Little, Brown & Company.

Two authors, in print

Frank, R. H., & Bernanke, B. (2007). Principles of macro-economics (3rd ed.). Boston, MA: McGraw-Hill/Irwin.

Corporate author, author as publisher, accessed online

Australian Bureau of Statistics. (2000). Tasmanian year book 2000 (No. 1301.6). Canberra, Australian Capital Territory: Author. Retrieved from http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/CA2568710006989... $ File/13016_2000.pdf

Edited book

Gibbs, J. T., & Huang, L. N. (Eds.). (2001). Children of color: Psychological interventions with culturally diverse youth. San Francisco, CA: Jossey-Bass.

Dissertations

References for dissertations should include the following elements: author, date of publication, title, and institution (if you accessed the manuscript copy from the

university collections). If there is a UMI number or a database accession number, include it at the end of the citation.

Dissertation, accessed online

Young, R. F. (2007). Crossing boundaries in urban ecology: Pathways to sustainable cities (Doctoral dissertation). Available from ProQuest Dissertations & Theses database. (UMI No. 327681)

Essays or chapters in edited books

References to an essay or chapter in an edited book must include the following elements: essay or chapter authors, date of publication, essay or chapter title, book editor(s), book title, essay or chapter page numbers, place of publication, and the name of the publisher.

One author

Labajo, J. (2003). Body and voice: The construction of gender in flamenco. In T. Magrini (Ed.), Music and gender: perspectives from the Mediterranean (pp. 67- 86). Chicago, IL: University of Chicago Press.

Two editors

Hammond, K. R., & Adelman, L. (1986). Science, values, and human judgment. In H. R. Arkes & K. R. Hammond (Eds.), Judgement and decision making: An interdisciplinary reader (pp. 127-143). Cambridge, England: Cambridge University Press.

Encyclopedias or dictionaries and entries in an encyclopedia

References for encyclopedias must include the following elements: author(s) or editor(s), date of publication, title, place of publication, and the name of the publisher. For sources accessed online, include the retrieval date as the entry may be edited over time.

Encyclopedia set or dictionary

Sadie, S., & Tyrrell, J. (Eds.). (2002). The new Grove dictionary of music and musicians (2nd ed., Vols. 1-29). New York, NY: Grove.

Article from an online encyclopedia

Containerization. (2008). In Encyclopædia Britannica. Retrieved May 6, 2008, from http://search.eb.com

Encyclopedia article

Kinni, T. B. (2004). Disney, Walt (1901-1966): Founder of the Walt Disney Company. In Encyclopedia of Leadership (Vol. 1, pp. 345-349). Thousand Oaks, CA: Sage Publications.

Research reports and papers

References to a report must include the following elements: author(s), date of publication, title, place of publication, and name of publisher. If the issuing organization assigned a number (e.g., report number, contract number, or monograph number) to the report, give that number in parentheses immediately after the title. If it was accessed online, include the URL.

Government report, accessed online

U.S. Department of Health and Human Services. (2005). Medicaid drug price comparisons: Average manufacturer price to published prices (OIG publication No. OEI-05-05- 00240). Washington, DC: Author. Retrieved from http://www.oig.hhs.gov/oei/reports/oei-05-05-00240.pdf

Government reports, GPO publisher, accessed online

Congressional Budget Office. (2008). Effects of gasoline prices on driving behavior and vehicle markets: A CBO study (CBO Publication No. 2883). Washington, DC: U.S. Government Printing Office. Retrieved from http://www.cbo.gov/ftpdocs/88xx/doc8893/01-14-GasolinePrices.pdf

Technical and/or research reports, accessed online

Deming, D., & Dynarski, S. (2008). The lengthening of childhood (NBER Working Paper 14124). Cambridge, MA: National Bureau of Economic Research. Retrieved July 21, 2008, from http://www.nber.org/papers/w14124

Document available on university program or department site

Victor, N. M. (2008). Gazprom: Gas giant under strain. Retrieved from Stanford University, Program on Energy and Sustainable Development Web

site: http://pesd.stanford.edu/publications/gazprom_gas_giant_under_strain/

Professional Web site

National Renewable Energy Laboratory. (2008). Biofuels. Retrieved May 6, 2008, from http://www.nrel.gov/learning/re_biofuels.html

Data set from a database

Bloomberg L.P. (2008). Return on capital for Hewitt Packard 12/31/90 to 09/30/08. Retrieved Dec. 3, 2008, from Bloomberg database.

Central Statistics Office of the Republic of Botswana. (2008). Gross domestic product per capita 06/01/1994 to 06/01/2008 [statistics]. Available from CEIC Data database.

Entire Web site

When citing an entire Web site (and not a specific document on that site), no Reference List entry is required if the address for the site is cited in the text of your paper.

Witchcraft In Europe and America is a site that presents the full text of many essential works in the literature of witchcraft and demonology (http://www.witchcraft.psmedia.com/).

APPENDIX G

Example of table in bachelor's thesis

Table 1.3 – Determining the type of production

Production type	Annual program, units		
	Heavy (over 500 kg)	Medium (30-500 kg)	Light (up to 30 kg)
Low (job-shop)	up to 5	up to 10	up to 100
Small - batch	from 5 to 100	from 10 to 200	from 100 to 500
Medium - batch	from 100 to 300	from 200 to 500	from 500 to 5000
Large - batch	from 300 to 1000	from 500 to 5000	from 5000 to 50000
High (mass)	over 1000	over 5000	over 50000

APPENDIX H

Title slides of presentation

Навчальне видання

Методичні вказівки

до виконання кваліфікаційної роботи першого (бакалаврського) рівня для іноземних студентів спеціальності G9 Прикладна механіка (англійською мовою)

Укладачі: ІВАНОВА Марина Сергіївна
БАСОВА Євгенія Володимирівна

Відповідальний за випуск (завідувач кафедри) Пермяков О.А.
Роботу рекомендував до друку (експерт РВР) Клочко О.О.
В авторській редакції

План 2025 р., поз. ___

Підп. до друку (дата підпису проректора)_____.
Гарнітура Times New Roman.

Видавничий центр НТУ «ХПІ».
Свідоцтво про державну реєстрацію ДК № 5478 від 21.08.2017 р.
61002, Харків, вул. Кирпичова, 2

Електронне видання