**HALIÇ UNIVERSITY**

**FACULTY OF ENGINEERING**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**GRADUATION PROJECT GUIDE**

**JUNE 2024**

1. **INTRODUCTION**

Haliç University, Faculty of engineering, mechanical engineering graduation projects to be submitted to the head of the Department, writed and delivered in accordance with the guidelines specified in the guide are written.

Graduation projects that are not written in accordance with the format specified in the writing guide mentioned above will not be accepted.

1. **GENERAL RULES**

**2.1. Writing and Saving the graduation project**

Graduation projects are prepared on a computer and their printouts are taken from laser or inkjet printers. Project writing using a typewriter and dot matrix printer printouts are not accepted. Corrections, erasures and scrapings made by hand or typewriter are not accepted in any part of the graduation project.

The entire graduation project, including attachments, is prepared digitally as a single pdf file and transferred to CD. The prepared pdf file must be the same as the copy of the project delivered to the Department Head. Files must be uncompressed and unencrypted. Turkish characters should not be used when naming files. When naming files, the information it contains should be added to the end of the author's name and surname.

***Example:***

name\_surname\_project.pdf

Project attachments in text format or prepared by photocopying should be included in the pdf file containing the full text of the project. The tables, figures and formulas in the graduation project are created on a computer. Those that cannot be created on a computer are written using a template. These cannot be corrected manually.

**2.2. Paper and Printing System to be Used**

All printouts must be taken on A4 (210 x 297 mm) standard white paper, known as "first pulp", weighing between 80-100 grams. Only one side of the paper should be used in writing the final project. Duplication of the project copy must be made from the original project. Printouts should be taken from computer printers and copies should be clear and legible. After the final project is bound and cut for edge trimming, its final dimensions should be 205 x 290 mm.

**2.3. The Style Of Writing**

Graduation projects must be written in English, on a computer, with proper spelling and punctuation. First-person narration should not be used, except for the preface and footnotes.

**2.4. Font**

In project writing, 12 point "Times New Roman" font should be used and the font color should be black. Texts in tables and figures can be reduced to 8 points if necessary. Table and figure titles and references to be written under tables and figures should be in 10 point font. The text is written in upright and normal letters, bold letters are used in headings. Italic font can be used only when necessary (Latin name, abbreviations, definition, etc.). A one-character space must be left after all punctuation marks such as commas and periods.

**2.5. Page Layout**

In the graduation project, a margin of 3.5 cm should be left from the left edge of the page, excluding covers, and 2.5 cm from the other edges (right, bottom and top). Explanations and footnotes must also remain within the specified limits. Only the page number can be included outside the text area. The foreword, contents, listings, sources, CV and main section headings of the project should be written 5 cm below the top edge of the page, aligned to the left.

**2.6. Line spacing and layout**

The term “spacing” in the manual refers to the distance between lines of text, which is approximately equivalent to two lower case letters. The project text is written with 1.5 line spacing and justified. The project's preface, contents, summary, references, resume, abbreviations, figure and symbol lists and appendices, as well as figures and names and explanations of tables and figures in the text, and footnotes should be written with 1 line spacing.

Paragraph indentation starts 1.25 cm in and no empty space is left between paragraphs. In the project text, no distinction is made between hyphens and syllables in words.

While abbreviations, tables, figures and symbol lists are being prepared, explanations are written with 6 point spaces before and after, as in normal text.

First degree headings start on a new page and a 72-point space is left before the heading text and 18-point space is left after it. Before second-level headings, 18-point, then 12-point space is left, before third- and fourth-degree headings, 12-point, and then 6-point space is left. A title lower than the fourth degree is not used. There must be written text under each heading.

Headings cannot be written as the last line of the page. If 2 lines of text cannot be written after the heading, the heading will be on the next page. The first line of a paragraph cannot be written as the last line of the page, and the last line of the paragraph cannot be written as the first line of the page.

**2.7. Page Numbering**

All pages of the project are numbered except the outer and inner covers and the foreword section.

Starting from the contents page, front pages such as the list of abbreviations, tables, figures and summaries, if any, are numbered with Roman numerals (I, II, III…), and the text part starting with the introduction is numbered with Arabic numerals (1, 2, 3…).

Page numbers, parentheses, dashes, etc. It is written 1.5 cm above the bottom edge of the paper and in the middle of the writing frame, without using signs. Page numbers should be written in Times New Roman characters and the font size should be 12 points.

**2.8. Tables and figures**

The tables, figures and formulas in the project are created in computer environment. Shapes that cannot be created on a computer are drawn according to technical drawing principles, and text and symbols are written with a template. Manual correction cannot be made in such shapes.

All tables and figures in the project are referenced in the text. For tables and figures taken from other sources, the source should be cited after the table name or figure name.

Tables and figures should be placed after their first mention in the text and as close as possible, provided that they comply with the page layout principles. More than one table or figure can be placed on the same page. If deemed necessary, some tables or figures can be given in the Appendices section.

Tables and figures are written as "Table 1.2." where the first number is the section number and the second number is the sequence number of the table or figure within the section. and “Figure 1.1.” are numbered in the format. A space must be left after the last point of the numbering. The number and description of each figure are written below the figure, and the number and description of each table are written above the table. The figure name or description is written centered, and the table name is written aligned to the left edge.

The table caption should be written using line spacing in the word processor, with a 12-point space before the text and a 6-point space after it. The table header and the entire table should be on the same page. In tables exceeding one page in size, the same table number and its superscript should be written at the beginning of the second page, and (continued) should be written in parentheses between the table number and its superscript.

The first paragraph in the text section after the table should be written with 12 point space from the top and 6 point space from the bottom. The headings immediately following the tables should be used exactly as they are, without making any changes to the heading formats mentioned above.

There should be a 6 point space between the figure and the figure caption, and a 12 point space afterwards. The shape name is written with a space. The figure caption and the entire figure should be on the same page. For figures exceeding one page in size, the same figure number and subtitle should be written at the end of the figure on the 2nd page, and the same figure number and subtitle should be written in parentheses (continued) between the figure number and subtitle.

Figures should be formatted in line with the text. The last paragraph in the text section before the figure should be written with a 6-point margin from the top and a 12-point margin from the bottom.

### 2.9. Equations

Equations are written with 1.5 line spacing. A 6 point space is left before and after equations. No blank lines are left before and after equations. In this case, a 12-point space at the top and a 12-point space at the bottom will be left between the equations and the text. Equations are numbered sequentially, starting from 1, provided that the section number is the first number in the relevant section. These numbers are written as (1.1), (1.2), .... in the first section, (2.1), (2.2), .... in the second section, to the far right of the line where the equation is located.

**2.10. Footnotes**

Footnotes should be numbered in round brackets on the page they appear in the text and separated from the main text by a line drawn at the end of the page. Letter size in footnotes should be 10 points.

**2.11. Main Titles and Space**

Each section and subsection in the project must have a classification number and a title. Very long titles should be avoided. “Decimal number” should be used in numbering the headings. In this system, the first number indicates the main section, and the following numbers indicate the subsections.

***Example:***

**1. MAIN TITLE**

* 1. **Sub-Title**

**1.1.1. Second-Degree Sub-Title**

**1.1.1.1. Tertiary Sub-Heading**

All chapter titles are written in bold, a space is left after the last dot of the title number, and no punctuation marks are placed at the end of the title.space after any punctuation at the end you are left with will be.

**3. RULES REGARDING THE CONTENT AND WRITING OF THE CHAPTERS OF THE GRADUATION PROJECT**

**3.1. Sorting in the preparation and editing of the graduation project**

Sections that must be included in a project, should be listed as below:

* Outer cover (**Appendix 1**)
* Edge of the project (**Appendix 2**)
* Inner cover (**Appendix 3**)
* Preface (**Appendix 4**)
* Ethical declaration of the graduation project (**Appendix 5**)
* List of contents (**Appendix 6**)
* List of abbreviations (**Appendix 7**)
* List of symbols (**Appendix 8**)
* List of figures (**Appendix 9**)
* List of tables (**Appendix 10**)
* Abstract (**Appendix 11**)
* The text of the project (introduction, literature review, materials and methods, results, discussion, conclusions )
* Recommendations
* References
* Appendix (if necessary)
* Curriculum vitae

**3.1.1. The Outer Cover**

* All information on the cover is centered horizontally, leaving 5 cm from the top and bottom edges, and 3.5 cm from the left and right edges. White glossy cardboard material is used on the cover of the volume and the texts on it are written in bold colour. The cover of the project must be prepared in accordance with the following rules and the attached example (APPX 1). After the project defense exam, 2 (two) bound copies of the final version of the project are delivered to the Department Head, after making any corrections requested by the jury members.
* Title block (University, Faculty, Department Name) 5 cm below the top edge;
* The name of the graduation project by leaving a space of 11 lines (out of 12 pt.) after the bottom line of the title block;
* “Graduation Project” with 2 line spacing (16 points);
* “Prepared by…” with 2 line spacing (12 points);
* “Consultant…” with 4 line spacing (12 points);
* Province and Year should be written with 10 line spacing (12 points).
* An example of the project ridge is given in APPX 2.

**3.1.2. Inner Cover**

Inner cover of the project name prepared by who; it is delivered by the University, Faculty, Department name, Project title, Project, date of Defense; Project contains the names and signatures of the advisor and the other jury members (Appendix 3). the advisor and the other jury members **(Appendix 3).**

**3.1.3. Preface and/or Thank**

The foreword covers the opinions of the project author, independent of the content of the project, and the special message, purpose and wishes he wants to convey. The student's thanks to the people or institutions from which he received help are also included in this section and do not exceed one page. The preface page is not numbered and is placed after the inner cover when binding the project. The city name and year are stated at the bottom left of where the foreword ends, and the author's name is stated at the bottom right (Appendix 4). The Project Ethics Declaration should be prepared according to the example in APPX 5.

**3.1.4. Contents**

Within a sequence of contents of the project, and page numbers according to the area where they are located. Subject-headings and sub-headings written in a manner in front of the decimal system of graded according to the starting page number will show.

Main section headings in capital letters and in Bold Type, sub-section headings to be larger in the first letter of the two letters is written starting from the inside of the cavity. 1.5 line spacing before and after the main chapter headings, sub-section headings are between 1 line separated by space.

**“CONTENTS”** centered at 5 cm from the top edge of title page is written. From dark and 1.5 line below based on the right **page no.** In the example below, from left-aligned EK6 1.5 line is written to display the information that was given to the face where it is located and the page numbers are given. The final numbers on the bottom of the page numbers in the future, right-justified, should be written. The project section that appear in the text of sub-section headings, references, and appendices must be accompanied by full in the contents page numbers in the text **(APPENDIX 6)**.

List of contents is written in 1 line spacing. Dark titles written in big letters in the first degree. Second, third, and fourth degree is the first letter of each word in the titles written in large dark letters, leave a space before and after the title.

**3.1.5. Abbreviations and symbols**

A lot consists of more than one word is used in the project and can be made using the initials of the terms of that acronym. The abbreviation in the text, while the expression first shortened the spelling exactly as written, and the abbreviation in parentheses are shown. In later writing, the abbreviation can be used. Acronyms TDK Spelling according to the rules specified in the grid should be done.

The institution of acronyms and abbreviations, organization or phrase they are in a shortened form of **“ABBREVIATIONS”** are given in a list under the title. Centered at 5 cm from the top edge of the title page is written. 1.5 abbreviations spaces as aligned to the left of the page are sorted in alphabetical order and written to show what's in front of them. List of abbreviations in the first 6, then 6 should be prepared as 1 point spaced by a gap **(APPENDIX 7)**. While preparing the space you are left with 1 line symbols. The village of symbols, normal description is written. In the absence of any symbol that the project need to be given in this section can be removed **(APPENDIX 8)**.

**3.1.6. Tables and figures**

The table all remaining drawings or pictures, except the “shapes” under the title should be collected. Graphic/map/diagram/plan/Photos etc are included in this group. Tables and figures is placed centered in the page. Shape or patterns, and in the event of overflow from the page, or have a lot of numbers must be less or the “attachments” section must be submitted.

Patterns and shapes, the first digit chapter number, the second number of the graph/shape, including the main sections of the sequence number within the section “ Table 1.2.”, “ Figure 1.1.”; table A1 in the attachment.”, “ Figure B1.” in the form of a sequence number is given. Table numbers and titles on the top of the tables, written under the form of figure numbers and descriptions. Tables/figures can be taken from another source if the shape name or description are given at the end of the reference number.

Tables and figures and the text between the top and bottom of 1 space (1.5 line spacing) should be left blank.

On the front the **“TABLES”** or **“FIGURES**” in the title, centered at 5 cm from the top edge of the page are overwritten. Space 1.5 line right aligned given **on Page No.**, Table/figure numbers are written in order from the left, with 1.5 line below based on names, and the page number where the face is located **(APPENDIX 9 and 10).**

Lists of tables and figures in the first 6, then 6 points gap should be prepared by by leaving leaving Line 1 spacing.

**3.1.7. Abstracts**

In abstract, to contain all the parts to briefly introduce the research is prepared. Abstract of the project purpose, scope, methods, conclusions, it is stated in a clear and concise way. In abstract, italic font, table, figure, graph, mathematical formulas, symbols, sub-or superscripts, Greek letters or other non-standard symbols or characters should not be included. should not exceed 200 words.

Keywords of related disciplines appropriate to the databases that are used by project title, in consideration of the words should be chosen. Keywords should be related to the content of the project, and under the abstract left-justified should be written. Should be at least 3 to 5 the number of keywords.

In abstract, the source is not given.

At the beginning of the abstract, centered on the page in big letters title and format in the first degree (first 72, then the 18-point gap by leaving) is written.

Under the heading abstract of the project, the name of the project under the title of the abstract, then the big bold letters given prior to 12 spacing with row 1, then must be typed with 12 point margins.

**3.1.8. Section of Text**

A section of text, introduction, literature review, materials and methods, results, Discussion, conclusions and recommendations sections, and includes without limitation the page is written.

If a footnote is required, the appropriate 2 characters from the text to the bottom of the page should be written with lowercase letters. Footnotes should be separated by a thin horizontal line from the text.

Always begins on a new page all the main chapters. The main section and subsection headings, as described in section 3.1.1 of this manual should be written.

**3.1.8.1. Introduction Section**

The text part of a project, **“1. INTRODUCTION”** the word dark and at 5 cm from the top edge of the page in big letters, and written in the same line with the beginning of a paragraph begins with 14 points.

Input section the reader to other publications on the subject, without the need to read the project must contain adequate information to enable you to understand and evaluate. If there are previous studies on the subject that are required for the word, that is given in the entry section. When a search is made of excerpts in studies previously made technical and scientific literature in quality and quantity should be considered to be informative.

**3.1.8.2. Literature Review**

Literature review the literature with regard to working in the information in the section is given. From previous studies performed work related to the project are mentioned. General information is given to the subject of a preliminary nature. Project work and the need for a definition of the problem and reveals the reasons and the purpose of the study is clearly stated.

**3.1.8.3. Materials and methods**

Materials and methods used are presented in an order which states clearly in project work. To construct this portion of the project in a manner that can be easily understood; a similar sequence of steps to reach a goal of the studies is presented. The schematic representation is made where needed in the case. The reader of the project before moving to the results section, research tools, methods and should be able to clearly see the steps of the study.

**3.1.8.4. Results**

Any findings from the study in this section is written. The findings are supported with tables and figures. Information provided about finding obtained from the study of every one in a sequence.

**3.1.8.5. Discussion**

In this chapter, the findings obtained from the study of scientific principles and in the light of literature information and data should be discussed. In discussion, while figures and tables given in the results section with resources about the subject (reference) should be cited.

**3.1.8.6. Conclusion**

 This section should be presented in a sequence of results from the original study.

**3.1.8.6. Recommendations**

Be made according to the results of this study should be stated in this section, if appropriate they are working for the future. This optional section can be written as.

**3.1.9. References**

**3.1.9.1. Citation of The Source Within The Text**

While preparing the project should be defined precisely by always naming the source of the information obtained from other sources. Different methods are used to show the source. However, the department prepared for our projects dipnotsuz **with the number of the citation the export method** should be used. The text in [ ] brackets are numbered. Graduation project given in First Source [1] at the start are numbered according to the order number and delivery.

The resources cited in the text is done in the following format.

[1] the No. 1 source,

[1-3] between 1 and 3 (1, 2, and 3 ) resources

[1,3] sources 1 and No. 3

[1,3, 8] 1, 3, and 8 resources

[1,3-8] between 1 and 3 with No. 8 resources resources.

Resources with the same name that has more than one skin, each skin is used to separate the reference number should be given.

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**3.1.9.2. Citation of The Source In The Resources Section**

All resources are addressed and used in the project, **“RESOURCES”** and under the heading within the project according to the order of the number is given. The title of the village is written as 12 points and aligned to the left. Then, on space 2, space (two 1,5 space) are released. A spacing of my article is used. All references to project a reference in the ‘references’ section should be listed.

 ***Examples :***

**Periodical publications:**

[1] Surname, A., Surname, B. B., and surname, C.,. The name of the published article, the article appeared in the journal name, volume and issue number 7(1), (year), page number in the range 1-12. Doi:

**Books:**

[2] last name, A. A., book name, Publisher, place where it was published (Year).

**Symposia, Conferences, Papers:**

[3] last name, A. Surname, B. B., and surname, C., the name of the publication of the notification statement symposium, Convention, meeting or conference Name, (s. 1-12), (year, month), the city, if any, university, or organization.

**Thesis:**

[4] last name, A. A., graduate or doctoral dissertation is the name of the type of the thesis, college, graduate school, (year).

**Web site:**

[5] [http://www.halic.edu.tr](http://www.halic.edu.tr/), (date of access:).

**3.1.10. Citation of Attachment**

If it takes place within a project, subject to the distributor, and endangers the continuity of reading too lengthy to be given as footnote descriptions, drawings, diagrams, etc. separate from the text is added to the end of the project.

Attachments to be placed into the preparation of the project and shall be made in accordance with the following rules:

The resources page of the project to a blank page after “**APPX**” (14 points, and village) is written on the next page and inserts are sorted. “**APPENDIX**” (12 points) the word below 5 cm from the top edge of the page, Left-justified, and written in Bold Type. Each is presented in the appendix starting on a separate page. Each appendix should be given a number and a name.

For example, “**an additional 15: instructional programs**such as”.

Adds page numbers of the chapter, after the references section should continue with a page number.

**3.1.11. Curriculum vitae**

The student's preparing the project in chronological order, a brief resume on the last page stating the project are contained. **“Curriculum vitae”** (14 points) under the topic 3. - person narration should be written.

***Example:*** He was born in 1960. He completed his primary, secondary and high school education in Istanbul.

**APPX 1: Outer Cover Sample**

**HALİÇ UNİVERSİTY**

**ENGINEERING FACULTY**

**MECHANICAL ENGINEERING DEPARTMENT** (12 pt)

**GRADUATION PROJECT NAME (**16 pt)

**GRADUATION PROJECT** (12 pt)

**Written by**

**Name SURNAME** (12 pt)

**Advisor**

**Title Name SURNAME** (12 pt)

**İstanbul – Year** (12pt)

**APPX 2: Back of Project Sample**

**Name and Surname of Project**

**NAME OF PROJECT**

**YEAR**

**APPX 3: Inner Cover Sample**

**HALİÇ UNİVERSİTY**

**ENGINEERING FACULTY**

**MECHANICAL ENGINEERING DEPARTMENT** (12 pt)

**GRADUATION PROJECT NAME** (16 pt)

**GRADUATION PROJECT** (12 pt)

**Written by**

**Name SURNAME** (12 pt)

**Graduation Project Jury Signature**

**……………………….. (Advisor)** (12 pt)

**……………………….. (Member)**

**……………………….. (Member)**

**Submission Date :**

**Presentation Date :**

 **APPX 4: Preface Sample** (12 pt.)

**PREFACE**

The texts within the preface sections remain 1 line spaced. The foreword written as the first page of the project does not progress.

This section would like to thank the institutions that supported the project and the people who helped. In the preface text, advertisements are given on a copyright basis, and dates are given throughout the month and year, aligned left. These two are not sure to line up.

Date Moon, Year Name Surname

**APPX 5: The ethical declaration of the graduation project** (12 pt)

…../…./20..

**ETHICAL DECLARATION OF THE GRADUATION PROJECT**

I submitted as a finishing project “...........…." I have been a consultant from the beginning to the end of this work titled ....Title Name, Surname.... i declare that I completed it under the responsibility of the , collected the data /samples myself, conducted/had the experiments/analyses performed /made in the relevant laboratories, showed the information I received from other sources completely in the text and bibliography, acted in accordance with scientific research and ethical rules during the study process and accepted any legal consequences if the opposite occurs.

 (Signature)

(Name Surname)

**APPX 6: The List of Contents Sample** (12 pt)

**LİST OF CONTENTS**

**Page No.**

**PREFACE**

**ETHICAL DECLARATION OF GRADUATION PROJECT**

**LIST OF CONTENT**

**ABBREVIATION**

**SYMBOLS**

**FIGURES**

**TABLES**

**ÖZET**

**ABSTRACT**

**1. INTRODUCTION**

**2. LITERATURE REVIEW**

**3. MATERIALS AND METHODS**

**4. RESULTS**

[**4.1.**](#_Toc245868084)

[**4.2.**](#_Toc245868085)

**5. DISCUSSION**

**6. CONCLUSION**

**7. RECOMMENDATIONS**

**8. REFERENCES**

**9. APPENDIX**

**10. CIRRUCULUM VITAE**

**APPX 7: Abbreviations Sample** (12 pt.)

**ABBREVIATIONS**

**GDP** : Guanozin difosfat

**HW** : Hardy-Weinberg

**L** : Litre

**APPX 8: Symbols Sample** (12 pt.)

**SYMBOLS**

**Mx, My, Mxy :** Moment Components

**Nx, Ny, Nxy :** Normal Force Components

**t :** Time

**ᵚ :** Angular Velocity

**APPX 9: List of Figures Sample (12 pt)**

**FIGURES**

 **Page No**

**Figure1.1.** Name of Figure 1.1

**Figure 1.2.** Name of Figure 1.2

**Figure 2.1.** Name of Figure 2.1

**Figure 2.2.** Name of Figure 2.1

**APPX 10: List of Tables Symbol Sample** (12 pt.)

**TABLES**

 **Page No**

**Table 1.1.** Name of Table 1.1

**Table 1.2.** Name of Table 1.2

**Table 2.1.** Name of Table 2.1

**APPX 11: Abstract Sample** (12 pt)

**ABSTRACT**

**NAME OF GRADUATION PROJECT**

The abstract is prepared to briefly introduce the research conducted, including all sections. In the abstract, the purpose of the project work, its scope, the method used, and the conclusions reached are stated clearly and concisely. Italic fonts, tables, figures, graphs, mathematical formulas, symbols, subscripts, superscripts, Greek letters or other non-standard symbols or characters should not be included in the abstract. Abstract example given in Appendix 11 and abstract should not exceed 300 words.

Keywords should be selected in accordance with the project title, taking into account the words used by the databases of the relevant branch of science. Keywords should be related to the project content and should be written left aligned below the abstract.

Sources are not given in abstracts.

**Keywords:** Keywords 1, Keywords 2, Keywords 3,