

CHAPTER NINE

THESIS PREPARATION

OCCASIONS

- ✓ After the completion of their required course work, every
- undergraduate student (BS, BSE, BSc., BA, BEd., ...)
 - Master's degree student (MS, MSE, MSc., MA, MBA, MEd., Dipl.-Ing. ...)
 - Ph.D./D.Sc. candidate (= doctoral student who has successfully passed his/her qualifying examination)
- has to write a thesis.

★ WHAT IS A THESIS?

- ≡ a **comprehensive report** of
theoretical and/or experimental investigative work done
on a specific topic
in the subject area of the program
the degree is offered by

- ★ A **thesis** is an important **milestone** in a student's life, because it

- ① is a **learning experience** for the student
- **learning** how to
 - do literature search and compile background information
 - involves learning how to best use library resources
 - analyze current theories and/or methods
 - involves learning how to
 - use information available through library resources
 - think analytically
 - think critically
 - develop and/or improve a theory
 - involves
 - intellectual "openness"
 - abstract thinking
 - conscientious courage to improvise/experiment with ideas

- ↘ involves
 - having analyzed available approaches to similar problems in the same and/or other subject areas
 - ↘ lead to
 - learning how to come up with **original** ideas to solve problems
 - develop and/or improve experimental methods
 - ↘ pretty much like «develop and/or improve a theory»!
 - develop and/or improve disciplined S&T writing skills
 - ↘ **why?**

② **prepares** the student **for** the harder tasks in his/her **professional life** such as

- ① planning a project
- ② carrying out a project
- ③ learning how to use available resources
- ④ searching for specific data
- ⑤ disciplining work habits
- ⑥ organizing team work
- ⑦ *your suggestions here ...*

HOW ARE THESES CLASSIFIED?

- ★ An undergraduate student's thesis is often called a **Senior Project**.
- ★ A Master's student's thesis is a **Master's Thesis**.
- ★ A doctoral candidate's thesis is often called a **Dissertation**.

GENERAL GUIDELINES FOR WRITING

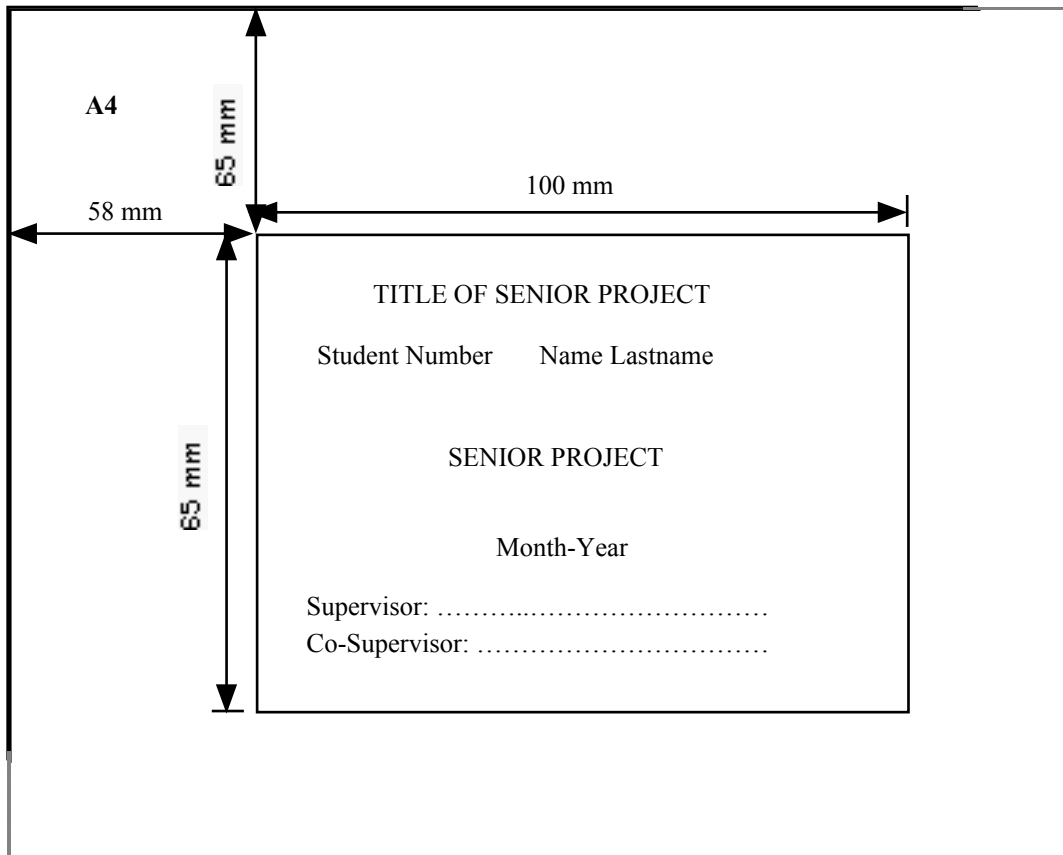
- ✓ A thesis should **review** your **original ideas and work** that led to the degree.
- ✓ Start with and work from a **carefully prepared outline**.
- ✓ **Review** all related work and compile a valuable literature review
 - ↘ learn about the history of science and technology
- ✓ Give special attention to the **Introduction** to
 - clarify the problem
 - give your reasons for selecting the problem

- give your approach to the problem
- summarize what you have learned during the course of your study
- ✓ Start **writing early** - long before the thesis is due, because, writing is a **painful** and **time-consuming** process!!!
 - ➡ Write while things are still fresh in your memory
 - ➡ Revise several times and add forgotten details
- ✓ Remember that on the average, a quality
 - ★ senior thesis takes 2-3 months to write
 - ★ Master's thesis takes 4-6 months to write
 - ★ dissertation takes 6-9 months to write
- ✓ **A final word:**

- × Your early **reputation** as a professional and your **job prospects** may relate to the **quality of the work** you did while working on your thesis!

PARTS OF A THESIS

- ❶ Format
 - ❷ Front Matter
 - ❸ Body
 - ❹ Back Matter

❶ Required format for İTÜ BSE candidates**❶ Front Cover Page**

③ Suggested format for Front Matter

- ◆ Dedication page – optional

Dedication (12p)

Centered with no indent. (12p, double spaced text)

- ◆ Acknowledgments/Foreword

Acknowledgments/Foreword (12p)

Text (12p, double spaced non-indented text) ...

- ◆ Abstract - mandatory in Master's theses and dissertations

TITLE OF YOUR THESIS (14p)

Your Name, the degree to be awarded (12p)

The Name of your University, Month and Year of Graduation

Supervisor: your supervisor's name

Abstract text (12p, double spaced text)

◆ Table of Contents

Table of Contents	
(12p, single spaced text)	
<i>LIST OF FIGURES</i>	V
<i>LIST OF TABLES</i>	VI
<i>NOMENCLATURE</i>	VII
<i>ABBREVIATIONS</i>	VIII
CHAPTER ONE : INTRODUCTION	1
1.1 Statement of Thesis	1
1.2 Motivation	1
1.3 Objectives	6
1.4 Overview	7
CHAPTER TWO : _____	10
2.1 _____	10
2.2 _____	10
2.3 _____	14
2.3.1 _____	14
2.3.2 _____	15
... ..	
CHAPTER ____ : CONCLUSIONS	87
_.1 Summary of Accomplishments	87
_.2 Limitations	89
_.3 Implications	92
APPENDIX A: _____	94
A.1 _____	94
A.2 _____	100
A.2.1 _____	101
A.4 _____	102
... ..	
REFERENCES	128
VITA	132

④ Suggested format for Body

◆ General

<MAJOR SECTION: *HEADING 1*>

<Chapter n: Chapter Title:*Heading 2*>

<Body text to begin here.>

[*Text*: The first line of each paragraph is indented one-half inch, as shown, and the lines are justified, i.e., the right margin is even rather than ragged¹.

HEADING 3

Heading 4

Heading 5

Table 1: Example of caption (over the table) aligned left.

Figure 1: Example of caption (under the figure) aligned left.

Illustration 1: Example of caption (under the illustration) aligned left.

text hanging indent: The paragraph is indented one-half inch to the right after the first line, as shown. Apply *text hanging indent* style to bullet points or lists.

text indent: The left margin of this paragraph is set in one-half inch, as shown. Apply *text indent* style to paragraphs nested within listed items.

text no indent: The first line of this paragraph is not indented. Use this style for descriptive legends, facing caption page numbers, or any text in which the first line should not be indented.

¹This is a sample footnote.

text quote: for prose quotation over four lines. This text is indented on the left and right. Do not use quotation marks if the quotation is indented except for quotations nested within the block quote. The first line of a block quote is not indented.

Block quotes are single-spaced, with a one-line space between paragraphs, as illustrated.

reference: The paragraph is indented one-half inch to the right after the first line. It is single-spaced between lines and double-spaced between paragraphs. Apply *reference* style to bibliography and references listings.

Examples:

(leave two blank double spaced lines)

Chapter One: (14p)

Introduction (14p)

(leave one blank double spaced line)

1.1 STATEMENT OF THESIS (12P)

Write the intention of your thesis here (12p, indented double spaced text)... .

1.2 MOTIVATION

...

(placement and numbering of equations)

$$\Omega[T(t)] = A \int e^{-\frac{E}{RT(t)}} dt \quad (1-1)$$

...

2.1 MAJOR HEADING 1 - in Chapter Two (12p)

2.2 MAJOR HEADING 2 - in Chapter Two (12p)

2.2.1 Heading 1 - under Major Heading 2 in Chapter Two (12p)

2.2.2 Heading 2 - under Major Heading 2 in Chapter Two (12p)

2.2.2.1 Subheading 1 - under Heading 2 under Major Heading 2 in Chapter Two (12p)

◆ Placement of figures, tables, and their captions - see **Chapter Six!**

◆ Internationally allowed fonts:

This is Book Antiqua.
This is **Arial**.
This is Courier.
This is Georgia.
This is Palatino Linotype.
This is Tahoma.
This is Times New Roman.
This is Trebuchet MS.

⑤ **Suggested format for Back Matter**

- ◆ Appendices - like in **Body**.
 - ◆ References - you may choose any numbered style you wish.
-

(leave no space from the top of the writing space)

Appendix

Optional—must be placed in this order if it is included in the thesis/dissertation. Do not forget to start each section on a new page.

Glossary

Optional—must be placed in this order if it is included in the thesis/dissertation.

<Bibliography/References> (14p)

A reference/bibliography section must be included at the end of your thesis/dissertation, even if you also use chapter end notes. Any standardized format for a reference or bibliography list is acceptable IF it is approved by your supervising professor and if you follow it consistently.

[1] Write your first reference in your preferred style using 12p font no-spaced hanging indent format. Leave a blank line between consecutive references.

...

[33] Write your thirty-third reference in your preferred style using 12p font no-spaced hanging indent format. Leave a blank line between consecutive references.

◆ Vita - this is a mini version of your résumé – optional

no blank lines on top of the writing space

Vita (14p)

<The vita is a brief biographical sketch of the writer. It should include the writer's date and place of birth; name of parents; schools and colleges attended; degrees awarded; publications and experience in teaching, business, and industry; and military service, if any.>

Permanent address: (Your parents' address here)

00000 City

(leave enough blank space here such that the following lines are at the bottom of the writing space)

This thesis was typed by the author (if you typed it, else give the name of typist) using (special software like LATEX, Microsoft Word for Windows etc.).

⑥ Page numbering (all 12p)

- Front Cover page is not numbered.
- Dedication page is numbered (ii) in the center at the bottom of the page.
- Acknowledgments/Foreword, Abstract, Table of Contents, List of Figures, List of Tables, Nomenclature, and Abbreviations are numbered in the same way consecutively using small Roman numerals.
- The first page of **Chapter One** is numbered (1) in the center at the bottom of the page.
- The rest of the text through the **References** are numbered consecutively using Arabic numerals.
 - ★ The page numbers for the **first page of each chapter** are placed **in the center at the bottom of the page**.
 - ★ All the other page numbers are placed on the **upper right corner of each page**.
 - ★ Vita page is not numbered!

References:

Campbell, W. G. (1990). Form and Style in Thesis Writing, a Manual of Style. Chicago, IL, The University of Chicago Press.

Day, R. A. (1988). How to Write & Publish a Scientific Paper. Phoenix, AZ, ORYX Press, Ch. 23.

Thesis and Dissertation Templates for Microsoft Word. (1996) The University of Texas at Austin Computation Center, Austin, TX.

Turabian, K. L. (1987). A Manual for Writers of Term Papers, Theses, and Dissertations. 5th ed. Chicago, IL, The University of Chicago Press.

Other Resources:

http://www.ehb.itu.edu.tr/hizmetler/bitirme_yazim_kurali.html

http://www.ehb.itu.edu.tr/hizmetler/bsc_thesis_of_ozlem_kalinli.pdf