I. Definition of “thesis” and “dissertation”

Theses and dissertations are divided largely into two types: scholarly paper (research paper) and thesis and dissertation. The first type, academic theses and dissertations, refers to papers published in the journal of professional academies, collection of papers of universities, collection of papers of research institutes inside and outside universities, or those published in book format. The second type, thesis and dissertations, refers to papers that are submitted to acquire a Master’s or doctoral degree after completing the Master’s or doctoral program. Thus, they may be considered as products of education in graduate school. In other words, theses and dissertations are measures for determining whether one can contribute creatively to the accumulation of knowledge on important subjects in the field of one’s own specialty or perform research independently.

Theses and dissertations are required to be submitted in any case as a requirement for obtaining a degree from a graduate program. They differ from general research papers in that they need to be specific. That is, it is the norm that the trace of efforts made and time spent are reflected in theses and dissertations by presenting historical research on the topic for discussion or sufficient data.

As writing a thesis and/or dissertation differs from the case of graduation theses, the output should be based on the student’s own creativity and originality rather than being processed as directed by a supervisor. Students should not excessively rely on the direction of a supervisor for the methods to use or procedures to follow. Students in postgraduate courses tend to expect constant instruction from a supervisor in the research process. This is not an attitude appropriate toward the preparation of a thesis and/or a dissertation.

II. Research ethics for theses and dissertations for completing an academic degree

There is no best method to conduct research and also no universal method that applies to all fields of scientific study. Practices, which are recognized as responsible research actions, may vary by study area or laboratory. However, there are important common values for responsible research that restrict all researchers. The first is integrity in delivering information honestly, including keeping promises. The second is accuracy in reporting research results, including avoiding errors. The third is efficiency in utilizing resources. Lastly, objectivity is needed; this requires clarity in language such that room for interpretations is largely non-existent and undue prejudice is avoided.

If you are a responsible and conscientious researcher, you should conform to the abovementioned important values that define research ethics. For this, the exact meaning of research misconduct needs to be examined, and additionally, requirements regarding the protection and welfare of animals and humans as subjects of experiment need to be well established.

1. Research misconduct
   Research misconduct is defined as the “forgery, falsification, plagiarism, duplicate publication, and unjust indication of an author regarding research planning, conduct, or evaluation, or reporting of research results.”

   1) **Forgery**: Act of creating non-existent data or false research results and recording or reporting these
   2) **Plagiarism**: Act of plagiarizing another’s idea, content, and results without due approval or citation
   3) **Falsification**: Act of distorting research content or results by artificially manipulating research data, equipment, or process or arbitrarily changing or deleting data or research results
   4) **Duplicate publication**: Act of publishing content that is completely the same or almost the same in different scholarly journals without providing information on the publication status of the research content
   5) **Unjust indication of author**: Act of not granting qualification of author to a person who made scientific and technical contributions to research content or results without justifiable reason, or granting qualification of author to a person who has not made scientific and technical contributions for reasons such as token of appreciation or honor
   6) Act of willfully interfering with investigation for suspicion of fraud by oneself or others or harming the informant

2. Protection of humans as subjects of experiment
   Regarding research, having humans as a subject of experiment brings benefits from various perspectives ranging from contribution to the development of new drugs and medical treatment to understanding of how we think and behave. However, such experiments can cause risks to the research subject that are cannot be predicted. To ensure such risk is not greater than the benefits gained through experiment, research targeting humans is strictly regulated.

   Researchers targeting humans should conform to all governmental rules relating to the protection of subjects, applicable laws, regulations, and policies of government-funded institutes. Moreover, they should also follow

reasonable rules made by expert groups. Above all, they should be aware of the following items to carry out such responsibility:

1) Know which research is subject to regulations.
2) Understand and follow the rules for a project's approval.
3) Receive appropriate training.
4) Exercise continuous responsibility of conforming to rules in all stages of the project.

3. Protection of animals as subjects of experiment

As in experiments targeting humans, animal research is subject to strict regulations for various reasons. Regulations for research targeting humans arose from the need to avoid imposing an intolerable burden to the small number of subjects vis-à-vis considerations for the benefits that all humankind can get through research targeting humans. Animals can also benefit from information gained through animal experiments, and some studies are conducted for the purpose of improving the health of animals. However, most animal experiments are usually carried out for humans, not for animals. Moreover, unlike humans, animals cannot consent to participation in an experiment or provide feedback on treatment, and thus, special requirements need to be considered when experiments are conducted using animals:

1) Know which types of activities are regulated.
2) Understand and follow the rules for approval of a research project.
3) Receive appropriate training.
4) Exercise continuous responsibility of conforming to rules in all stages of the project.

If you plan to experiment on live animals in research, you should be aware of the responsibilities prior to planning or conducting the research and then obtain approval from a person in an authorizing position.

Accordingly, in our university, Sookmyung Women's University Institutional Animal Care and Committee (SMU-IACUC) was established on May 26, 2008. Regarding deliberations for research and investigations that perform animal experiments using animal experiment facilities within SMU, as well as educational training and committee management, regulations are enacted. Thus, the research institute and researcher performing animal experiments within or outside the University should submit "Application for planning of animal experiment," including research planning and research items, to the ethics review committee, submit to the review, and receive approval prior to conducting experiments.

For other detailed items, refer to the regulations of the animal experiment ethics review committee on the homepage of SMU-Industry-Academic Cooperation Foundation.

III. Structure and style of theses and dissertations

1. Requirements for basic editing

The items to keep in mind before writing a paper via computer are as follows.

1) **Input tool**: Write using Hangul below or MS Word or any corresponding program.
2) **Paper size**: Set A4 (210 mm x 297 mm) in a vertical direction as a default.
   Keep in mind that the editing standard is different from the binding standard.
   Further, the paper margins, font size, and other regulations below should be followed for editing. The printed paper should be sent to a bindery for binding in accordance with the binding standard.
3) **Paper margin**:

(1) For Hangul below: The paper margin for editing should be adjusted as follows.
- Top and bottom margin: 42 mm; header and footer: 15 mm
- Left and right margin: 40 mm; binding: 0 mm
- Line spacing: 180% as standard
- Alignment method: both right and left

(2) MS Word
- Paper margin: Custom margins in the page layout should be adjusted as follows.
- Top and bottom margin: 5.7 cm (without header and footer)
- Left and right margin: 4.0 cm; margin for binding: 0 cm
- Line spacing: line spacing standard (N) as double in paragraph, set value (A) to 1.4

4) **Alignment method**: All content should be based on full alignment.
   First line of each paragraph is indented by two characters.
5) **Font**: sinmyeongjo or batangche
6) **Font size**:

(1) Big title - 16 point (use myeongjo, sinmyeongjo, or batangche), bold
(2) Middle title - 14 point (use myeongjo, sinmyeongjo, or batangche), bold
(3) Subtitle - 12 point (use myeongjo, sinmyeongjo, or batangche), bold
(4) Main text - 11 point (use myeongjo, sinmyeongjo, or batangche)
(5) Footnote - 9 point (use myeongjo, sinmyeongjo, or batangche)

7) **Font color**: Black
8) **Page number**: 20 mm from the bottom, place in the middle, do not put hyphen (-)
9) **Line spacing:** When writing using Hangul below, it should be based on 180% by default, but depending on the case, adjustment is possible between 130% and 200%. On MS Word, it should be based on 1.4 line spacing by default.
10) **Paragraph format**: For paragraph titles, indentation should be made as unit lowers. However, the start of each paragraph should be indented by two characters regardless of title location.
11) When text in a chart or a long quotation in the middle of a page is processed as a paragraph but involves changing lines, the standard should still be 10 point font size and 130% line spacing (0.5 line spacing on MS Word). However, adjustments may be made to avoid editing problems.
12) The table of contents should be written according to the same procedure as the main text of the paper.

* Hangul and MS Word's editing paper setup screen: During working on Hangul and MS Word

2. Binding method for theses and dissertations

1) **Paperboard**: 4 x 6 backboard (18.5 cm x 25.5 cm)
2) **Paper material, thickness, and color**: A4 standard, vellum paper of greater than 80 gr/m^2
   However, when printing on both sides, advanced paper may be used to prevent characters from bleeding through the opposite side.
3) **Cover**: Dark brown or black; a thick hard cover is required.
4) **Cover** and printing of spine: Cover and spine should conform to <annex 1>, and the font should be printed in gold.
5) **Binding method**: Cloth binding
6) **Title page**: Refer to <annex 2>
7) **Submission form**: Refer to <annex 3>
8) **Approval form**: Refer to <annex 4>
9) **Language**: Although Korean is the principal language, any foreign language may also be used.
10) **Quantity of paper and pages**: No limits

3. Composition and order for theses and dissertations

Theses and/or dissertations can be divided largely into the preliminary, main text, and reference materials sections. For each main section, the following sub-sections are included.

Although space for the preliminary section is generally the same regardless of the field of study, acknowledgments are optional, whereas figures and appendices, table of contents, and abbreviations are applied only when needed. For other items in addition to tables, figures, and appendices, their table of contents will be included after the table of contents for appendices.

The content of the main text varies by field and whether in the humanities and social sciences or natural sciences. Universal details are shown in the following table. However, composition of the main text may vary by the nature of the researcher's department.

Reference materials are organized in the order of references, appendices, and abstract in a foreign language. Other items, such as figures, can be added and should be attached after the additional annex. For more details on sub-items, refer to "How to write a thesis and/or dissertation" in the next chapter.

(1) Humanities and Social Sciences	(2) Natural Sciences
<Preliminary>	**< Preliminary>**
Cover	Cover
Title page	Title page
Submission form	Submission form
Approval form	Approval form
Acknowledgement	Acknowledgement
Contents	Contents
List of tables	List of tables
List of figures	List of figures
List of appendices	List of appendices
Abbreviation	Abbreviation
Abstract	Abstract

Keywords in Korean **<Main text>** Introduction Body Conclusion **< Reference materials >** References Appendices Index Abstract in a foreign language Keywords in a foreign language	Keywords in Korean **<Main text>** Introduction Material and method Results Review and discussion Conclusion **<Reference materials>** References Appendices Index Abstract in a foreign language Keywords in a foreign language

IV. Methods for writing theses and/or dissertations

1. Stages of writing

1) Selection of paper topic

The paper topic should be concise and clear as it indicates the fundamental problems to be discussed or the key content. It should be expressed in one sentence. The following items need to be considered when selecting a topic. First, the paper topic should be one that has sufficient basis as a problem, knowledge on which the researcher has interest and concern. Second, if possible, the topic should be creative and innovative. Third, it is good to choose a problem from which a clear conclusion can be drawn; that is, the topic must involve a solvable problem in consideration of the given conditions and researcher's abilities. In addition, the possibility for development and expansion needs to be taken into account.

2) Collection of research data

Data come in many forms depending on researchers' field of specialty and research subject. Data required in research include not only literature data but also those gained through experimentation, observation, field survey, and materials of fact that are gained from interviews with individuals or groups. The first thing you should do in the data collection stage is to examine the reference data related to the research subject. Reference data and literature reviews not only confirm the creativity of the research topic but also provide new ideas relating to the research topic and are useful in the objective analysis of research results. Further, systematically collecting data by setting the direction of the data collection and goal is important.

3) Evaluation of collected data

The appropriateness of the collected data for a paper topic should be well evaluated. When inappropriate data are included in a paper owing to the incorrect assessment of the data collected, time is wasted and the value of the paper decreases. Accordingly, data evaluation should be carried out continuously both when collecting, organizing, and recording information obtained from reference materials and literature review and that collected through experimentation, observation, field surveys, and interviews.

4) Organization of data

By conducting rational analyses on the selected data that had been properly evaluated, the data should be systematically classified and synthesized and then systematically organized to form linkages between sets of data. As organized data take up a significant part of the paper and can be a guide for establishing an outline of the paper, they should be managed efficiently. By making a data card or inputting the organized data to an internal computer or an external storage device, data can be easily found when needed.

5) Organization of a thesis and/or dissertation

Regarding the organization of a paper, prior to writing a paper in earnest, you should have a rough outline in the stage of developing an outline. Such an approach boosts confidence in writing and helps maintain the logical consistency of the paper. An outline should include the expected content when the paper is completed, order to be followed, specific research method, source of data, and references. Depending on the case, when setting the direction of data collection, you can first form a framework for the paper and then collect data and repeat the process in steps 2) to 5).

6) Writing the main text

In writing the paper, the researcher is expected to express the combination of the facts, obtained as a result of survey and experimental research, criticism, and evaluation, as well as present circumstantial evidence in accordance with the appropriate format. What needs to be emphasized in the stage of writing is logical consistency, accuracy, and consistency of various indications and formats. Further, the paper structure should be noted as well.

7) Completing a thesis and/or dissertation

After writing the main text, you should complete the paper by organizing the sections required to establish formality as a thesis and/or dissertation: the preliminary and reference materials sections. As one before the main text, the preliminary section includes the title page, submission form, approval form, acknowledgement, tables of contents, list of tables, and list of figures, abstract in Korean, and abstract in a foreign language, and should be drafted according to the University's prescribed method of paper writing. Reference materials include the cited references and appendices. Although the abstract and keywords in a foreign language should be written in English by default, they can be written in other languages as needed.

2. Method of writing **a thesis and/or dissertation**

1. Humanities and Social Sciences

A) Preliminary

In the preliminary stage, basic forms for submitting the various parts of a paper, including the cover, title page, submission form, and approval form, are included. They consist of the part that shows the table of contents prior to the main text. Next, the details on the preliminary stage for writing a paper are described.

(1) Cover and spine

On the front cover of the paper, you should write the ① paper title in Korean or English (when the text is written in English), ② name of the affiliated graduate school, ③ affiliated department or field of study, and ④ name of the author. On the spine (side page of the paper), you should write the ① paper title, ② submission date, and ③ name of the author. At this time, the area for the lines indicating "Master's thesis or doctoral dissertation" on top of page and affiliated graduate school, department or field of study, and submitting researcher's name on the bottom must be filled in their respective specific locations. The title area in the middle should be set in the appropriate size by the prescribed length (refer to <annex 1>).

As the title is the equivalent to the face of the paper, it should be composed as to clearly inform the reader of the paper's content. As the research range is set large in most studies of natural sciences, the title should be established to fit the definition explained earlier after the end of the experiment. Moreover, as the paper title for the research plan goes through the formal announcement of the paper, or the pre-screening process, it may be revised but within the range in which it does not differ largely from the original content of the research plan. A title may be written in Korean or English depending on the language of the main text.

(2) Title page

One white page is inserted after the cover, and on the next page, the ① title in Korean, ② title in English, ③ name of affiliated graduate school, ④ name of affiliated department or field of study, and ⑤ name of researcher are again written. Although the size of the cover and title page is different, all formats should be followed equally (refer to <annex 2>).

(3) Submission form

On the page after the title page, the ① paper title in Korean or English, ② name of supervisor, ③ submission form, ④ paper submission year and month, ⑤ name of affiliated graduate school, ⑥ name of affiliated department, and ⑦ name of researcher should be written. The submission date should be written as the expected graduation year and month (年月); the date (日) should be omitted. For all requirements, you should follow the rules presented in the appendices. For the paper title, the font size may be adjusted depending on its length. As the paper submission date is earlier than the graduation date, those who are expected to graduate in February should write December of the previous year as the applicable year, whereas those who will graduate in August should write June of the applicable year (refer to annex 3).

(4) Approval form

On the page after the submission form, the ① approval, ② Korean title or English title, ③ expected date of approval, ④ signature space for examiners (examiners for Master's degree: three people; examiners for

doctoral degree: five people), and ⑤ name of affiliated graduate school, should be written. As the approval date is earlier than the graduation date, those who will graduate in February should write December of the previous year and those who will graduate in August should write June of the applicable year, as in the case of the submission date (refer to annex 4).

(5) Acknowledgement

The researcher may express appreciation to those who have directly guided the research as a supervisor or provided help in various forms, including advice required for research and cooperation for data surveys. It is general to express appreciation; exaggeration or overly light expression of appreciation should be avoided. The acknowledgement section is not mandatory.

(6) Table of contents

The table of contents is a skeletal structure revealing an outline of the paper and includes the Korean abstract and main text, references, appendices, and abstract in a foreign language. The table of contents is generally divided into three levels, including chapter, section, and clause. A dotted line should be typed after each title, and the page number on which the content starts should be marked.

e.g.) Korean abstract ·····iii
Chapter 1 Introduction ·····1
Chapter 2 (title) ·····10
Section 1 (title) ·····10
Section 2 (title) ·····20
1. (title) ·····20
2. (title) ·····30
Chapter 3 (title) ·····80
Chapter 4 Conclusion ·····100
References ·····110
Appendices ·····120
Abstract in a foreign language ·····130

e.g.) Classification of chapter, section, and clause levels

(7) List of tables

When there are tables, figures, and photos, the "list of" tables should be written and inserted after the table of contents. The page number on which tables and figures are contained should be indicated. The sequence should be <Table 1>, <Table 2>·····, [Figure 1]·····, [Figure 1]·····.

(8) Korean abstract

The Korean abstract, which briefly tells the overall flow and argument of the paper, plays a role in helping readers understand the general content and direction of the paper. The Korean abstract should be written in Korean regardless of the main text language. There is no need to list the paper title, researcher's name, department name, and university name to avoid information overlap with the abstract in a foreign language in the last part of the paper. It should be described simply between pages 2 and 5 in the completed paper.

Article 39 (language) (article name changed and amended December 15, 2008)

Theses and/or dissertations should, in principle, be written in Korean. The researcher should choose one foreign language among English, German, French, Chinese, and Japanese, and the foreign language abstract should be attached. When the main text of the paper is in English, an English abstract and a Korean abstract should be prepared. When the main text of the paper is in a language other than English, the researcher should include an abstract in the applicable language, along with the Korean and English abstracts.

B) Main text

(1) Introduction

The introduction describes the research requirements, purpose, core problem, research significance, and implications based on a summary (succession and criticism) of previous research results for the research topic. When using concepts or terminologies specific to field of study, which are difficult to be used in general context, the introduction plays an important role in preventing the issue from being dispersed by clarifying

the definition of such words. The introduction should be the first chapter, and page 1 of the paper starts from the first page of the introduction.

(2) Main text

As the main text is the core of the paper, it should discuss and demonstrate the researcher's findings, opinions, analysis, claims or objections, and criticism on the basis of clear and persuasive grounds for argument. Therefore, logical consistency is the life of the main text. Although footnotes should be faithfully provided to reinforce the persuasiveness of the essay, it is desirable to exclude information not directly related to the essay content. Diagrams or charts may be used, but a clear basis or origin should be provided in a range that does not interfere with the description flow of the essay.

(3) Conclusion

As the conclusion is the end of the paper, it reconfirms the key results of the study or findings and can suggest a new research subject that should be studied in the future. In addition, proposals and recommendations grounded on the research are not always necessary.

C) Reference matters

(1) References

Statements cited in the main text or footnotes must be referenced appropriately and included in the reference list. References should be arranged in order of Eastern (in the sequence of Korea, China, Japan, and other countries) and Western literature, and in the order of Korean or Roman alphabets based on the author's name. However, when needed, they may be divided first into materials, books, papers, and others, and then arranged in accordance with the earlier standard in each range (category).

(2) Appendices

When needed, appendices should be inserted after the list of references. When there are more than two appendices, they should be marked by clearly dividing into <Appendix 1>, <Appendix 2>, and so on (in case of English, Appendix 1, Appendix 2 or Figure A, Figure B), and each appendix should have a title.

(3) Abstract in a foreign language

The abstract in a foreign language summarizes the content of the paper briefly, and should clearly describe the content in accurate expression. On top of this abstract, the paper title, researcher's name, field of study, and university name should be stated. When the abstract of the paper is in Korean, the researcher should choose one foreign language among English, French, German, Chinese, and Japanese; when the abstract of the paper is in a foreign language, the researcher should write in the same language as the language used in the main text. It should be between pages 2 and 5 of the completed paper.

(4) Keyword

You should write keywords in Korean after the Korean abstract, and English after the English abstract. Five to eight keywords should be listed, double spaced after abstract; draw 11/2 pt. line and write keywords in lowercase (Refer to annex 8).

2. Field of natural sciences

A) Title page

The method for writing the cover, title page, submission form, approval form, and acknowledgement is the same as that in the field of humanities and social sciences.

(1) CONTENTS

The table of contents, list of tables, list of figures, list of appendices, and Korean abstract should not be numbered and should be displayed in order. Their corresponding page number should be in Roman lowercase. Next, the content of the main text is indicated in order. They should be divided into I, II, III…, and the order of sub-units should be subdivided by the order of 1, 1), A), (1), (A), ①, ②. Although units are basically divided in accordance with the requirements above, a different method may be used as needed. In the table of contents, you should draw a dotted line and give the page number; the page number should align with the right side of page (refer to annex 5).

(2) LIST OF TABLES

For tables used in the paper, you should draft the list in the order in which they appear in the paper. When writing the list, write the title of tables. Although it may be indicated in Korean or English, a combination of both is not permitted (refer to annex 6).

(3) LIST OF FIGURES

For figures used in the paper, you should draft the list in the order in which they appear in the paper. When writing the list, write the title of figures. Although it may be indicated in Korean or English, a combination of both is not permitted (refer to annex 6).

(4) LIST OF APPENDICES

Appendices should be written in the order in which they are referenced in the paper. When writing the list of appendices, write the title of appendices. Although it may be indicated in Korean or English, a combination of both is not permitted (refer to annex 6).

B) Korean abstract

The Korean abstract, which briefly describes the research, may be written in divided paragraph form. In this case, you should not number each paragraph and should apply the two character indent format for the start of new paragraphs. Although the abstract is written in a range of two to five pages, it should be written in a way that readers can understand the research content just by reading the abstract itself. What must be included in Korean abstract are the ① title of paper, ② research purpose, ③ research method, and ④ important research results. If needed, the main conclusion may be included. Further, in the abstract, references or diagrams cannot be used and use of abbreviations should also be avoided if possible. When abbreviations are inevitable to be used, you should write the full form first, indicate the abbreviation in parentheses, and then use abbreviation from the second time (for example: at first mention, write "Sodium Dodecyl Sulfate (SDS)"; from the second time this term is used, you should use "SDS"). Moreover, keywords should be written on the last line of the first page of the Korean abstract; five to eight keywords are appropriate. The Korean abstract and keywords should be separated by a 1.5 pt. line. Even when the Korean abstract is over several pages, you should record keywords at the bottom of the first page (refer to annex 7).

C) Main text

For this part, the universal rules for drafting the main text of theses or dissertations in the field of natural sciences are set. Accordingly, although this format may be used as it is or with slight revisions, special main text formats for each field may also be used in accordance with the nature of the study, as the field of natural sciences is too broad. These formats are roughly introduced in the following.

- Mathematics: Introduction, definition or lemma, theorem, and summary
- Statistics: Introduction, concept definition, simulation study, and conclusion
- Physics, chemistry, life sciences, food and nutrition, pharmacology: Introduction, materials and method, results, discussion, and conclusion
- Information science: Introduction, study on background knowledge, explanation about system and design, system implementation and results, and conclusion and future project
- Clothing and textiles: Introduction, literature review, research method and procedure, results and discussion, and conclusions and recommendations
- Home economics: Introduction, theoretical background, hypothesis setting and research methodology, results, discussion, and conclusion
- Fine arts: Introduction, theoretical background, analysis on characteristics of own work, and conclusion
- Music: Introduction, theoretical background, research method, and research results and conclusion

Although certain paper formats cannot be specified owing to the nature of the natural sciences as such, items that need to be considered when writing the paper are as follows.

(1) Introduction

The main text starts with an introduction, and the first page of the introduction becomes the first page of the paper. Thus, when starting the page numbering of the paper, use Roman (lowercase) for the preliminary part (contents, list of tables, and list of figures) and the Korean abstract part, and then Arabic numbers beginning with the introduction.

In the introduction, the research requirements and purpose, research problem, rationale for problem setting, research significance and importance, definition of terms, and research limitations are presented. The introduction

reveals the problem in which the researcher has an interest, and why such research problem is important and to what extent it is important. When the definition of the key variables of the research problem and limitations of the research are clearly stated, the rest of the paper can be conveyed without misunderstanding.

When first presenting the research problem at the beginning of the introduction, detailed or specialized and esoteric predicates or concepts should not be introduced. It is desirable to provide a general introduction of the research problem that will be explored in the paper. Further, the proper approach is to describe specifically a research problem after explaining the background of the research problem in addition to general research trends in the field related to the research problem. The research problem is drawn by examining the theory and previous studies using a logical and systematic method. It should be described by naturally and logically organizing concepts in accordance with the results of previous studies or the examination process of the theoretical background.

When using abbreviations, write the full form first (with the abbreviation indicated in parentheses) even for abbreviations used in Korean. Beginning with the second mention of the term, the abbreviation should be used. Abbreviations used in the introduction can be used continuously in the materials and method, results, review (discussion), and conclusion sections as well. When there are many abbreviations, you may draft a list of abbreviations separately and attach it after the list of appendices.

(2) Review of previous studies

The review of previous studies confirms the progress of contents that are examined or progress of studies to date. It is a process of avoiding duplication of research or confirming assumptions or propositions related to a research topic, and at the same time, a process of discovering new views related to one's own research subject through the review of existing practices and theoretical discussions.

The review of previous studies examines domestic and foreign academic journals or papers of related fields. Thus, information on research progress, problems of interest, research methods, and researchers can be obtained.

As the section "review of previous studies" is not mandatory, it may not be included in the main text. In such a case, you may proceed to "materials and method" immediately after introduction.

(3) Materials and method

As this item is essential for writing a paper for the field that requires experiment, it should be described accurately and in detail. In other words, the types and sources of materials used in the experiment and the experiment method should be described in detail, if possible. This is to help other people obtain the same results by repeating the same experiment even if the materials used in the experiment and experiment method are not creative. When the research method used is a creative method that you designed, it should be described in more detail. The detailed description of experiment materials and method is essential for determining whether the research results obtained by the researcher can be achieved or replicated through appropriate experiment by readers.

Regarding the materials and method, the experiment materials are written first and then the experiment method is written. They do not necessarily need to be divided. Moreover, when other researchers' method is cited or used with modifications, you must present a reference (refer to the format of literature referenced in the requirements for writing a paper in chapter 3)

Regarding the experiment materials and research method, the following items need to be considered.

(A) When naming experimental materials, use scientific names, if possible.

(B) When indicating animals, the strain should be clearly revealed.

(C) The general principle is to use a general name (Nonproprietary name, Generic name) for drugs and chemicals. When there is no general name, it should be written properly in accordance with the Merck Index.

(A) On the back of the names of the strains used in experiments and important drugs and experimental equipment, the purchase source (in the order of product number, manufacturer, manufacturing region, manufacturing country) should be stated such that other researchers can obtain the same items when needed.

(B) For the names of plants, animals, and microorganisms, the genus and species names should be written in italics. When writing, the full genus and species names should be written out first; from the second mention, only the first letter of the genus name and species name should be used (e.g., *E. coli* for *Esherichia coli*).

(C) When equipment used for research is newly designed, adequate figures may be used in the paper or appendices to help readers understand its use.

(D) When experiment results are processed statistically, the method used should be stated along with references.

(4) Results

The research results section is the most important portion that forms the main axis of the paper. When describing the results, the content described in the materials and method can be summed up here as needed. Research results should be presented accurately as fact gained from the materials and experiment method used. Revising the research results because they are not the ones that you expected is considered as misconduct.

Although research results may be explained in writing, the use of figures or tables helps readers in understanding the results. However, presenting the same results in the figures and tables should be avoided.

When presenting the research results in tables or figures, indicate the corresponding table or figure number in parentheses after the description of applicable results. Additionally, the tables and figures should be presented on the page following the applicable research results to ensure readers can easily refer to them.

(5) Review

Although a review (discussion) section may be separated from the results section in a thesis and/or dissertation, both sections may be merged and written as "results and review." This section is a description of the process to propose a new theory through theoretical analysis from various angles or to draw a conclusion, including accepting or rejecting the theory that was announced previously in the same field. Thus, for the validity of the conclusion to be recognized objectively, you should make reasonable claims for the findings by sufficiently citing studies that have similar meaning in terms of results or reported conclusion similar to your own in related fields, as well as studies that have drawn different conclusions. If the review is not written sufficiently to fit the logic of the thesis and/or dissertation, value is lost, and the paper will be merely a report of results.

Items to keep in mind when writing the review are as follows.

(A) A rambling repetition of the content described in the introduction or research method and research results should be avoided; the review should be written based on parts that are needed.

(B) To reach the correct conclusion based on the research results, you should accurately address the core of the problem such that the review does not become ambiguous.

(C) To avoid ambiguity in the review, the results, which need to be reviewed, should be written. It is inappropriate to highlight the results that you like among the results gained while not mentioning the results that you do not like.

(D) When critiquing the results of other researchers or opinions, do so diplomatically by presenting scientific evidence in a logical manner.

(E) At the end of the review, on the basis of the results of the research, the problem that needs to be studied continuously and the direction for addressing the said problem should be presented.

(6) Conclusion

The conclusion, as a summary of the entire paper, should be described simply and clearly; serial numbers are given for the content addressed in the research purpose, materials and method, results, and review. Depending on the case, a review may not be included. As statements on the research conclusion are already presented in the results and discussion to a certain extent, in the conclusion section, you should present the key conclusions at a general level rather than combining the aforementioned statements. The conclusion should be written in concise and simple sentences, excluding possible modifiers. Further, it is a principle not to cite literature in the summary part, which should only briefly summarize the paper. When drawing conclusions, consider previous findings and pay attention not to generalize or underestimate the research results.

Requirements for writing the conclusion are summarized as follows.

(A) The research purpose and materials and method should be described in one sentence concisely.

(B) The research results should be written concisely.

(C) Among the contents that are described in the review, the applicability of your own research results or future research method should be described concisely.

(D) References should not be cited.

D) References

This section should be prepared by creating a list of references for literature actually cited in the paper or indicated in footnotes and literature that are closely related to the research paper and data. For more details, refer to the format for quotations and references in chapter 3.

E) Appendices

In scientific papers, detailed data on symbols used in formulae or experiments and observations may be presented in a table. Such a table may be made an appendix that is added after the references. Further, information that can be a reference but not directly related to the unfolding of the content of the paper may be cut and added

as appendices. Items contained in appendices are usually additional descriptions, survey formats, questionnaires, mathematical tables, diagrams, legal provisions, chronologies, maps, and documents.

Appendices are written after references; they should start immediately without a page break.

F) Abstract in a foreign language

The foreign language abstract should be written in English as the standard and may be written in other languages in accordance with the characteristics of the major field of study. In this abstract, the research title shown in the Korean abstract, research purpose, method, and results should be written concisely. Unlike the Korean abstract, the researcher's affiliation and name should appear as well.

When a paper is written in a language other than English, abstracts in the applicable language, Korean, and English should be drafted.

G) Keywords

After the Korean abstract, you should write the keywords in Korean; after the foreign language abstract, you should write the keywords in the applicable language. Keywords, written in lowercase, should be limited to five to eight in number and should be separated from the abstract by a 1.5 pt. line.

3. Requirements for writing theses/dissertations

1) General format of quotations and references

A) Differences between quotations and references

Quotations are used to present others' work in the paper. When literature is cited in the paper, the author name and year of publication should be stated in parentheses after using footnotes or citing in the range in which content flow is not interfered.

References refer to sources that assist the separate gathering of more details on the references cited in paper. They are usually inserted in the last part of the paper. If one wants more details on references in a paper, one can look up the references. Thus, the basic elements of data included in quotations and references should match accurately. For the format of quotations and references, refer to each of the following descriptions.

B) Format of quotations

In the humanities and social sciences, footnotes are generally used instead of quotations. When adding footnotes, the following rules should be followed.

(1) Regarding notes, the preferred format is to place notes at the bottom of applicable page in the form of footnotes (脚註). However, in exceptional cases, endnotes (尾註) may be added at the end of each chapter or of the entire paper.

(2) Serial numbers in Arabic should be added as note markers; when there are many notes, serial numbers should be added by dividing for each chapter.

(3) When showing that others' statement was cited as a note, the bibliography of the cited statement should be recorded in accordance with the following form.

(A) In the case of a book, display the following in order: author name, name of book, publishing area: publisher, publication year, cited page.

Kimgyeongil, modernity of women, modern women, Seoul: Puleun-yeogsa, 2004, 73.

(B) In the case of a paper published in a collection of papers in the form of a book, display the following in order: author name, "name of paper," journal name, publishing area: publisher, publication year, cited page.

Jeonghyeonbaek, "Nationalism and Feminism," Feminism Research, Seoul: Dongnyeok, 2001, 30–31.

(C) In the case of a paper published in an academic journal, display the following in order: author name, "name of paper," journal name, publishing area: publishing institute, publication year, cited page. The journal volume and number should be indicated clearly.

Godonghwan, "Population trend in late Joseon Seoul and occurrence of urban problem," History and reality volume 28, Seoul: South Korea Historical Society, 1998, 191–192.

(D) When citing the same literature, do not use "Previous paper" or "前揭書"; display the author's name and title.

Kimgyeongil, modernity of women, modern women, 157.

In the field of natural sciences, quotations are inserted generally. The basic elements of quotations are author name, publication year of cited data, and range of citation (page number). In accordance with this order, it should be written in parentheses "( )" in the proper location of the body. Do not use punctuation between the author name

and publication year; one space will suffice. Depending on the case, the author name and publication year may be separated by a comma. For authors with Western names, only the last name should be stated. In the case when the author name is stated naturally in the main text, the author name should be omitted from the quotation and only the publication year and page number are stated. In other cases, the author name, publication year, and page number are necessary. You should put a period after the last word.

(1) When two or more papers from the same author cited are published in the same year, add lowercase letters (i.e., a, b, c…) after the publication year.
(2) When there are two authors, they should be listed and divided by a comma; and when there are more than three authors, write only the first author's name followed by "and others" (or "et al." for Western papers).
(3) When indicating a page number, it should be added after a comma following the publication year.

The above general standards for formatting quotations are applicable in accordance with the distinct characteristics of the major field of study or research field in the humanities and social sciences and the natural sciences.

C) Format of references

Literature cited in the paper should be included in the references list, except in special cases.

In the humanities and social sciences, listing references should conform to the following requirements.

(1) The manner of preparing the bibliography of references is the same as that for footnotes.
(2) References are arranged in the order of Eastern (Korean references should be placed first) and Western literature. They should be arranged in the order of Korean or Roman alphabets on the basis of the author name. However, when needed, you can first divide the reference list into materials, books, papers, and others, and then arrange for each accordingly with the aforementioned standard.
(3) References must be in accordance with the practice guided by the distinct characteristics of your major field of study or research field.

In the natural sciences, the principle is to write references in English and then arrange them in alphabetical order. When inevitably written in Korean, they should be organized in Korean alphabetical order and listed before the English materials.

(1) For books, write in the order of author name, publication year, signature, version number, series title and series number, issue details (Place of publication: Publisher), page (first page of quote–last page).

(Jeongyoungmi, 1989.)
Jeongyoungmi, 1989. Computerization of Library and Information Theory. Revised, Seoul: Gumimuyeog. 34-36.

(2) When there are fewer than two co-authors, write all authors' names in the order they appeared on the title page of their study. When there are more than three authors, write only the name of the first author followed by "and others." For foreign books, use "et al." instead of "and others."

(Yigyeonghwan and three others, 1994.)
Yigyeonghwan, Hwangseonmyeong, Juyoungtaek, Byeonwooyong. 1994. Software Engineering. Seoul: Cheongmungak.

(3) For periodicals, indicate the author name, publication year, paper title (title), place of publication, publication details (volume, number, month or season published), and page range (first page–last page of quote). A number should be put in parentheses following the volume. When the abbreviation of a periodical is in English, you should conform to the ISI Journal Abbreviation Index; for Eastern papers, the author name, title, and periodical name should be indicated in English in accordance with the notation specified by the country. However, as English equivalences may not be available for such materials as classic books, the Korean form may be used for accuracy.

(Yicheongja, 1984.)
Yicheongja, 1984. "Basic theory of technical information management for businesses and practice guide." Information Management Research. 17(4): 1-26.

(4) The title should be written according to the format it is written in the source material. In Western books, write the book title or name of a series in italics such that they are distinguishable. Paper

titles published as a book chapter or in an academic journal may be stated in quotes (“”).

2) Number, unit format, and abbreviation

For quantity used in the paper, Arabic numbers should be used, and International System of Units (SI) units or CGS symbols should be used. For unit and predicate abbreviations, follow the method recommended by each field of study or the professional academic organization belonging to the field of study. In other cases, explain the unit when it first appears in the main text.

4,567 km

International System of Units (SI)

centimeter gram second (CGS)

3) Format of tables and figures

A) Tables and statistical tables

Tables are used to present statistical data or research results as well as various similar facts presented in the paper concisely and in clearly organized manner.

As theses and/or dissertations report research results, results should be well organized so that readers can sufficiently understand the content. Thus, when you can sufficiently convey the research content with only written descriptions, you do not need to use a table. However, when you need to present data or results that need to be described over several pages when expressed in writing and are difficult to be expressed clearly, the use of tables is essential. When research data or results are presented in tables, a clearer and more concise paper can be drafted, particularly in the natural sciences. Therefore, if you use tables and figures adequately when writing your paper, you can omit unnecessary sentences and increase the understanding of readers.

(1) Basic requirement

Page margins are based on 130% by default for Hangul below. The font size for table titles and content should be 10 point. For editing convenience, margins and font sizes may be adjusted. However, the table title should be bolded.

(2) Location of table

Tables should be presented in a separate page following the page when the table is mentioned in the main text. When creating a table, it should be centered based on the left and right margin (not based on the top and bottom margin). The table should be located at the very top except, but within the page margins. However, depending on the case, tables may appear along with the main text on the same page immediately after the table is mentioned. Further, when the entire table cannot be added on the page in which it is mentioned, owing to being located at the bottom of page, you may write a summary of the main text in the end of that page to avoid leaving a large space on the page, and then add the table at the beginning of the next page. When presenting a table that takes up an entire page, write a summary of the main text to the end of that page after the mention of the table in the paper, and then add the table on the next page.

(3) Processing of exceedingly wide tables

It is fine to tilt wide tables vertically. The table title should be on the left side of the paper, that is, the side that is stitched when binding the paper. Further, when a table is handled vertically, the page number should be shown at the original position. If the table cannot be added even when tilted vertically, you may use two pages to accommodate the table: the left and right pages that face each other. The page number should not be marked on the front of the left side, but on the back where the table is. Further, the front should not be printed on. When the table size is so large that it cannot be handled by the aforementioned two methods, you should use a large sheet and fold it such that it aligns with the standard paper size.

(4) Processing of exceedingly long tables

Long tables should be divided into several pages. The table number and title should be on the first page of the divided table. Indicate that the table continues to the next page by inserting the phrase “to be continued” in parentheses on the right end of the last line on the first page.

(1) (5) Table number

Table numbers shown in the main text should be marked in Arabic in the order they are mentioned in the main text. In natural sciences papers, tables are generally in English even when the paper is written in Korean. In unavoidable cases, tables may be created in Korean. Thus, when written in English, you should mark title numbers as <Table 1>, <Table 2>, … and <Table 1>, <Table 2>, … when written in Korean. The table title must start from the top left line of the table.

(2) (6) Table title

Table titles should be located on top of the table. The table title concisely presents the content of the table in one sentence one space after the period following the table number. Explanations should be written on the bottom part of the table. When a table's title is longer than the table's width, write in more than two lines such that the text reaches the end of the right side of the table; begin a new line according to the title point of the upper line. It is fine if the line spacing is narrower than that of the main text. In addition, do not put a period at the end of the title. When the title is more than two lines, avoid word breaks on different lines whether in English or Korean.

<Table 1> Korean abstract of paper in Korean

<Table 2> When a table's title is longer than its width, you should draft it in more than two lines and it must reach the end of the right side of the table; check the alignment with the title point on the upper line.

(3) (7) Table borders

Have one line of space between the table title and table. When creating a table, use only horizontal lines, not vertical ones. However, depending on the field of study, vertical lines may be used. Moreover, the thickness of horizontal lines on the top and bottom of the table and the line that divides items and content should be 1.5 pt.; the rest should be 0.5 point. When a table runs over several pages, the bottom line of the table should be drawn only on the last page.

(4) (8) Table explanation

(A) When a table is cited from literature, its source should be stated as a footnote.

(B) Simple explanations about the table can be included (e.g., research method) to help readers understand the drawing of research results illustrated by the table even if they do not read the main text.

(C) Abbreviations or symbols used in the table must be explained in footnotes.

When adding a footnote to a table, use 1), 2), 3), … as superscript and continuously write without a space between the superscript and explanation. For statistical significance (e.g., $p<0.05$, $p<0.01$, and $p<0.001$), mark with *, **, ***; for multiple range test, use a, b, c, d, and display the information at the bottom. Use a period at the end of explanatory footnotes.

(5) (9) Page indication

Link the page that contains a table only to the page of the main text and indicate the page number. When you create a table by using facing pages (for wide tables), indicate the page number on both pages where the table is. The back of the facing page should not have a page number. When printing the side, content should not be printed on the back of facing page in which a table is included; it should be left blank. Additionally, when the side in which the table is included is folded (for wide or long tables), the page number should be inserted at the center of the folded surface.

A) Figure

As figures concisely present the research results, similar to tables, they are important in helping readers understand the findings. However, when presenting research results in figures, ensure that no information is duplicated in tables.

The various types of figures used in a research paper include graphs, photos, maps, diagrams, charts, and mimetic diagrams. Each has a writing method that requires special attention. However, in this chapter, only the general principles necessary for writing theses and/or dissertations are explained.

(1) Figure location

It is ideal to place one figure per page on the page after the figure is mentioned in the main text. However, depending on the paper, all figures (especially photos) may be placed after the "Results." Particularly, when inserting artwork (for papers in the arts programs), figures may be inserted after the appendices.

(2) Making figures

When research data or results are photographed directly, they may be enlarged or reduced in consideration of the paper size. However, when research data or results are presented in a graph, map, diagram, chart, or mimetic diagram using computer programs developed to draw pictures or when black ink for drawing should be used on tracing paper, which is used for drawing, you should draw by hand and use as is or photograph and use by printing to the appropriate size. When inserting a figure on a research paper, the use of diverse colors is prohibited, except

in the case of photographs or images that need to be in color. For differentiation or emphasis of parts in a figure, you may use various types of line or shades. Further, when drawing a broken linear chart, you should make a broken point in round, triangular, or rectangular symbols by always using the marker in data series format.

(3) Figure numbers

Throughout the paper, figures should be given separate numbers from tables and marked in Arabic in the order they appear in the main text. In the natural sciences, figure explanations must be in English, indicated as [Figure 1], [Figure 2], …; when the figure number is in Korean, depending on the research field, it should be marked in English as well (e.g., [Figure 1], [Figure 2], …).

The figure number, title, and explanation should be stated immediately at the bottom of the figure. The figure number should start from the bottom left side.

(4) Axis, scale, and legend marks

(A) Axis titles

The axis title should be placed on the left side and the bottom of each scale unit of the horizontal and vertical axes. The vertical axis title may be written vertically but should start from the bottom.

(B) Scales

The marking of the scale of the horizontal and vertical axes should not be too dense or broad. The scale mark should not be drawn in the chart or graph. The scale marking should be on the outer side of the axis. When the content presented by the horizontal or vertical axis occupies two units, it should be presented in two units by using both vertical axis on left and right. For the horizontal axis as well, units should be indicated by using the bottom and top sides, respectively. When the content or unit to be presented is more than three, both sides should be shown, and then the other scale should be indicated on the left side and bottom side first.

(C) Units

The unit of axis must be indicated and noted in parentheses following each axis title.

(D) Legends

When legend marking is needed, indicate them as necessary at the bottom of the table. However, they may be positioned on the right side depending on the shape of the figure.

(5) Figure titles

Figure titles are placed in the same line as the figure number, beginning one space after the period following the figure number. Endeavor to use one concise sentence that can express the content of figure well. When the figure title does not finish at the end of the right side because it is long, it should be presented in more than two lines, and each line should be aligned with the left start of the first line. Unlike the case of table titles, figure titles must be followed by a period.

[Figure 3] Korean abstract of paper in Korean.

[Figure 4] When the figure's title does not finish at the end of the right side because it is long, it should be presented in more than two lines, and each line should be aligned with the left start of the first line.

(6) Figure explanations

Figure explanations are included to describe concisely the contents mentioned in the main text, similar to table explanations. These are essential in natural sciences papers as a means to help readers understand the figures without having to reread the content of the main text. Figure explanations should be continuously written without changing lines by using the same number used in the figure title. When a new line is needed in the case of lengthy explanations, it should continue with a line starting from the left side of the title. In the case of microscope images, the method for sample dyeing and magnification should be written in parentheses at the end of the figure explanation. When the method of sample dyeing is stated in the figure explanation, only the magnification should be stated in parentheses.

(7) Processing of figures that are larger than the paper size of the thesis/dissertation

Figures that exceed the paper size may be used, but they must be reduced. However, for large maps or figures whose content is difficult to identify when reduced, printing may be done using large sheets that must then be folded in accordance with the paper's standard sizes.

(8) Processing of wide figures

You may use the same method as (7) or that mentioned in (3) and (4) for tables.

(9) Page numbers

The page on which a figure is present should be presented continuously on the side of the main text. The page number should be indicated on the same page when the figure explanation is stated on the facing page. The back of the page should not have a page number inserted. Additionally, when the page surface on which the figure is included as a folded sheet, the page number should be indicated at the center below the folded sheet.