

*This English translation is provided for the information purpose only.*

## DOCTORAL DISSERTATION PREPARATION GUIDELINES

### DISSERTATION

1. Dissertation is the result of thinking process. You need to describe the process of thinking in details including how you coped with difficulties during the research period and reached logical conclusions.
2. If dissertation contains multiple themes, you need to logically discuss the relationship among them.
3. Dissertation, unlike a research paper, needs to include the explanation of fundamentals, detailed research background, and both positive and negative results of basic experiments and pilot experiments.
4. Dissertation can be written in Japanese or in English.

### STYLE AND FORMAT

Times New Roman font, 12 point, with one-and-a-half (1.5) line spacing is advised for the body of dissertation. Use A4 size white paper and set all margins (top, bottom, and sides) to 25mm.

Cover (title) page is not numbered. “発表論文目録および学会発表目録 (List of publications and presentations) ” should be the first page, and the pagination continues throughout the rest of the text.

For final submission after modification following the defense, please prepare one copy in a simple binding (e.g. binding cord, file folder, thermal binding with a clear plastic front cover & a card back cover) and one electronic copy and submit them to the Student Affairs office.

## STRUCTURE

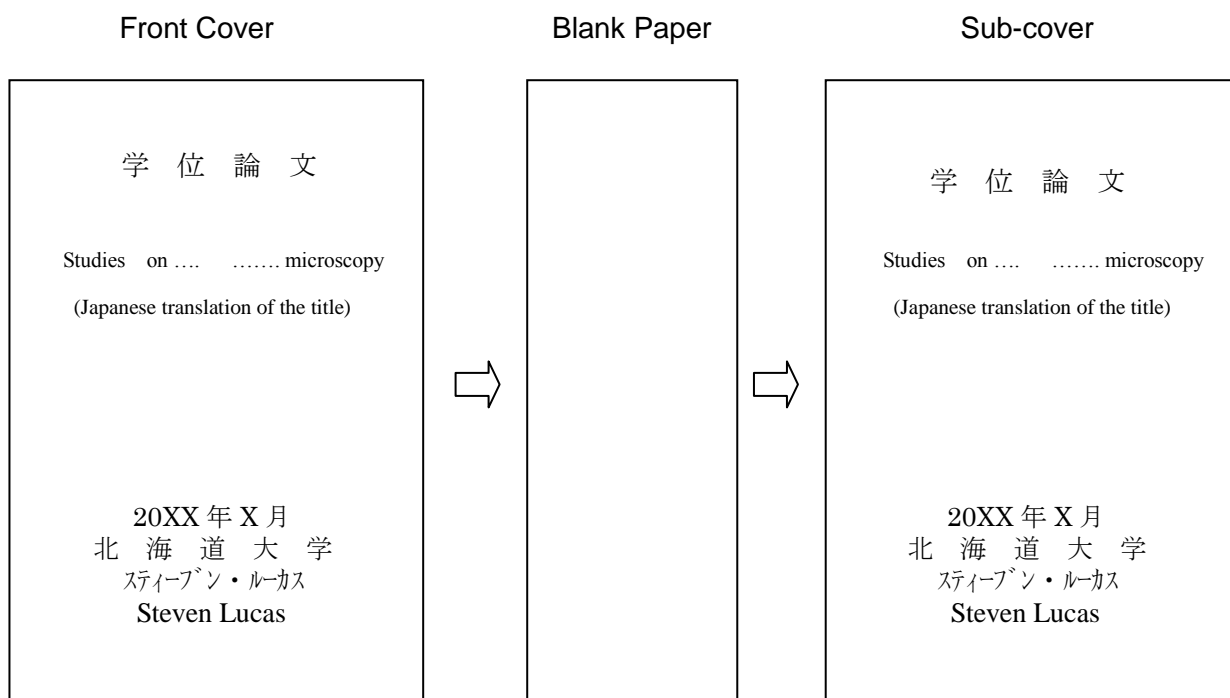
### A) Cover (title)

Fill in the following on both cover (title) and sub-cover pages. Insert a blank paper between cover and sub-cover pages.

“学位論文” (“Dissertation”) on the top, dissertation title in English and in Japanese in round brackets,

20XX 年 X 月 (year and month), “北海道大学”(Hokkaido University),

Full name of the candidate in Alphabet and Kana



### B) Table of Contents

List only the page number of the first page of each chapter C to K. Do not list a range of page numbers.

Example:

|  | Page# |
|--|-------|
| List of publications and presentations | 1     |
| Introduction                           | 2     |
| List of Abbreviations                  | 3     |
| Methods                                | 4     |
| Results                                | 6     |
| Discussion                             | 8     |
| Summary and Conclusion                 | 9     |
| Acknowledgments                        | 10    |
| References                             | 11    |

## C) List of publications and presentations

Publications: Include all papers regardless of the stage of publication. Name(s) of author(s), title, name of journal, publication year. If the paper is published, include details as the number, volume and pages. If the paper is accepted, use the term “in press”. If the paper is submitted, use the term “under review”.

Presentations: Include presentations at nation-wide or international conference only. Name(s) of presenter(s), title, name of the conference, date and place.

Example:

|   |
|---|
| <p><u>List of Publications</u></p> <p>1. Moon, S., Smith, G.A. &amp; Lim, Y.S. The Structure of Music Flows Using Network Analysis. New Media and Society, in press.</p> <p>2. Smith, G.A. A Measure of Centrality for Dense Networks with Valued Ties. Journal of Environment, 30, 11-20. 2011</p> <p><u>List of Presentations</u></p> <p>1. Moon, S., Smith, G.A. &amp; Lim, Y.S. The Structure of Music Flows Using Network Analysis. 12th International Symposium on Communication, June2–5, 2011, Paris, France.</p> |
|---|

## D) Introduction

1. Background (significance of the research, explanation of issues related to theme)
2. What is already known
3. Based on 1 and 2, what you are trying to address and find out
4. What this study adds

*Attention*: If there are multiple themes, and each theme needs to be discussed separately, please describe each theme in the different chapter after Introduction. Each chapter should have the following structure.

## Chapter #

- ① Title of the chapter
- ② Introduction of the chapter
- ③ Methods
- ④ Results
- ⑤ Discussion

\*After the chapter 2, please logically explain how it is related to the previous chapter.

## E) List of Abbreviations

Use of abbreviation is not desirable. If you use it, write the word in full and its abbreviation in brackets when it is mentioned for the first time. List of abbreviations should contain all the abbreviations used in the dissertation in alphabetical order.

There are abbreviations that can be used without writing the full words or being defined in the List of Abbreviations.. Please refer to the Instructions to Authors of the Journal of Biochemistry(Tokyo) (XII.TERMINOLOGY AND ABBREVIATIONS; 8. Accepted Abbreviations and Symbols: Table II).

### Example:

| <u>List of Abbreviations</u> |                          |
|------------------------------|--------------------------|
| LCM                          | laser capture microscopy |
| miRNAs                       | microRNAs                |
| UTR                          | 3'-untranslated region   |

## F) Methods

Reproducibility is the key, so that someone who read your dissertation can reproduce the research. Use figures, tables and pictures, include names of manufacturers of lab equipment or reagent.

In regard to animal experiment or recombinant DNA experiment, please state that the experiments were conducted according to the related laws and regulations, or internal guidelines. Please state the names of regulations and guidelines.

## G) Results

Please divide the results into subsections, put subtitle and describe each. Please describe the purpose, result and implications of data of each figure and table.

Figure and table should be at a minimum resolution of 600dpi in B&W or 300dpi in color, and should follow immediately after first mentioned in the text and should not be in an appendix. Please place the number and caption below figures or tables.

*Attention:* Please describe the results of experiments conducted during the graduate study period

including basic experiment, pilot experiment and screening experiment.

#### H) Discussion

Please discuss the findings from the research and their supporting evidence, also please discuss the limitations of the research.

#### I) Summary and Conclusion

Itemize the findings obtained from the entire research. Summarize their significance and suggestions for the further research in one or two pages.

#### J) Acknowledgements

#### K) References

References cited within the text and a reference list at the end should conform exactly to the “Nature” reference style.

References are each numbered, ordered sequentially as they appear in the text. When cited in the text, reference numbers are superscript. A reference list at the end should be in numerical order according to their order of appearance in the text. Please use EndNote to insert citations and create a reference list.

Japanese references should be listed together with the English references. A reference list may contain both English and Japanese references.

The spotted hyaena is a large carnivore that lives in social groups or 'clans' in which females socially dominate males<sup>13</sup>. Most but not all natal males disperse (that is, males leave the clan in which they were born and immigrate into a new clan)<sup>14</sup>, whereas female dispersal is very rare<sup>15</sup>. Immigrant male social status

*Nature: in-text citation with superscript numerals*

13. Kruuk, H. *The Spotted Hyena. A Study of Predation and Social Behavior* (Univ. Chicago Press, Chicago, 1972)
14. East, M. L. & Hofer, H. Male spotted hyenas (*Crocuta crocuta*) queue for status in social groups dominated by females. *Behav. Ecol.* 12, 558–568 (2001)
15. Höner, O. P., Wachter, B., East, M. L., Runyoro, V. A. & Hofer, H. The effect of prey abundance and foraging tactics on the population dynamics of a social, territorial carnivore, the spotted hyena. *Oikos* 108, 544–554 (2005)

*Nature: numeric reference list*

※ If there are less than 50 co-authors, please include all the co-authors. (See above “Nature: numeric reference list”.) If there are 50 or more than 50 co-authors, please write only first author followed by et al.

※ Please write the name of journal in italic type, according to the descriptive form of Pub Med. If the name of journal is represented in abbreviation, put a period after the abbreviated word. If the name of journal is not represented in abbreviation, don’t put a period. (Ex: *J. Exp. Med.*)

※ Write in the order of volume, first page–last page (year). Put comma after the number of volume. There is no need to include the number of issue. (Ex: 191, 1423–1428 (2000).)

※ There is no need to include information such as “,doi~” or “PMID”.

※ If you are citing anything from website, please note its URL. If there is information regarding the citation, it is desirable to cite from the original.