

Milestones for Graduate Students

Milestones in master and doctoral course include writing Review, Proposal, Journal Paper, and Thesis and this order is critically important for efficient research activities. Those steps are scheduled as follows in our lab and each step will be supervised by our senior members including supervisors. It allows each of students to recognize their status and progress during his/her graduate course. During the time of writing a review paper and a proposal (before *qualification*), students are not required to obtain or show new results in daily discussion as well as in lab seminar. Nonetheless, the stage of a review substantially helps students learn the update knowledge and techniques in the specific area of your study and the skills to write an academic paper and thesis. Those review and proposal can be directly included in master and doctoral thesis (usually 2nd chapter). In case of doctoral course, a review paper should be excellent and useful for others and should be considered for submission to one of academic journals.

Regarding the review, its title should be related to a research topic of each student. Title and structure of a review paper should be considered by students together with his/her supervisor. Supervisor and intermediate supervisor need to closely work with their students and specifies some intermediate deadline for an individual student to promote efficient writing and go to the next step, which is a design of your own research. Regarding research proposal, we provide its format after students submit their review paper. But, the format can be provided earlier upon the request from students.

Master Course (English or Japanese)

- 1st-2nd sem. Taking courses (lectures) and studying in workshops
 - Writing a review paper
 - Submitting a research proposal for ***Preliminary Defense (Qualification)***
 - Becoming ***Qualified Student***
- 3rd-4th sem. Studying in workshops
 - Conducting research and writing journal papers
 - Writing a master thesis
 - Going for ***Final Defense***

Doctoral Course (all in English)

- 1st-2nd sem. Taking courses (lectures, internship) and studying in workshops
 - Writing a review paper
 - Submitting a research proposal for ***Preliminary Defense (Qualification)***
 - Becoming ***Qualified Student***
- 3rd-4th sem. Studying in workshops
 - Conducting research and writing journal papers
 - Going for ***Mid-term Defense***

5rd-6th sem. Studying in workshops

Conducting research and writing journal papers

Summarizing the publications into a doctoral thesis

Submitting the review paper to an international journal

Going for *Final Defense* and *Final Examination*

Aim of Writing a Review Paper

The aim of writing a review paper is to succinctly review recent progress in a particular topic. Overall, the paper summarizes the current state of knowledge of the topic, so called “*state of the art*”. It creates a clear understanding of the updated knowledge and knowledge gaps on the topic for you and readers by discussing the findings presented in recent research papers.

A review paper is not a "term paper" or book report. It is not merely a report on some references you found. Instead, a review paper synthesizes the results from several primary literature papers with your own words to produce a coherent argument about a topic or focused description of a field. In addition, it requires you to question the information and opinions in a text and present your evaluation or judgment of the text. To do this well, you should attempt to understand the topic from different perspectives and in relation to the theories, approaches and frameworks in your field.

Deadline of Submitting Review Paper

- No deadline. Please submit it whenever you completed.

Please submit it to your supervisor together with the PDF files of all the references in your review.

You are required to meet the half of this requirements (in terms of number of words and references) at the time of preliminary defense. Review papers will be evaluated by facilities and potential intermediate supervisors. You will then receive comments on the submitted paper and are required to revise it if necessary.

Excellent database for Literature Survey

- Web of Science <http://isiknowledge.com/>
- Google Scholar <http://scholar.google.co.jp/>

Software to Write a Review Paper (requirement)

- Microsoft Word for main text
- Mendeley (freeware) or Endnote for management of references

Endnote can be provided to doctoral students upon request.

<http://www.mendeley.com/>

<http://endnote.com/>

Format of Review Paper in Master Course

- Language: English or Japanese
- Length: $\geq 2,000$ English words or $\geq 5,000$ Japanese letters (Reference list is not counted.)
- Number of references (peer-reviewed papers): minimum 20
- More than 80% of references should be reviewed papers in international journals while maximum 20% can be references written in Japanese.

Option 1. *Trends in Ecology & Evolution* (TREE, IF 15.7)

<http://www.cell.com/trends/ecology-evolution/authors>

Option 2. *Environmental Science & Technology* (EST, IF 5.2)

<http://pubs.acs.org/page/esthag/submission/authors.html>

Option 3. *Water Research* (WR, IF 4.9)

<http://www.elsevier.com/journals/water-research/0043-1354/guide-for-authors>

Option 4. *Hydrology and Earth System Sciences* (HESS, IF 3.1)

http://www.hydrology-and-earth-system-sciences.net/submission/general_terms.html

Option 5. 水環境学会誌

<http://www.jswe.or.jp/publications/guidelines/index.html>

Option 6. 水文・水資源学会誌

<http://www.jshwr.org/~jshwr/ed/#tougou/>

Format of Review Paper in Doctoral Course

- Language: English
- Length: $\geq 3,000$ words (Reference list is not counted.)
- Number of references (peer-reviewed papers): minimum 50
- More than 90% of references should be reviewed papers in international journals while maximum 10% can be references written in Japanese.

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