

Guidelines on Doctoral Thesis Proposals and Qualifying Exam for Graduate School of Medical Science and Engineering and Biomedical Science and Engineering Interdisciplinary Program

(Effective from August 29, 2019)

Enacted: January 24, 2014

Amended (1): September 8, 2015

Amended (2): September 25, 2017

Amended (3): June 19, 2018

Amended (4): August 29, 2019

1. These Guidelines have been prepared by the Degree Conferment Committee to help students prepare their thesis proposals and the qualifying exam.
2. These Guidelines provide general matters regarding the preparation of thesis proposals and the qualifying exam as well as timing, preparation, and method of review.

Degree Conferment Committee of KAIST Graduate School of Medical Science and Engineering/Biomedical Science and Engineering Interdisciplinary Committee

A. Regulations on Doctoral Thesis Proposals and Qualifying Exam

1. Review of thesis proposals and the qualifying exam (hereinafter collectively referred to as "thesis proposal review").
(Students admitted prior to 2016: Thesis proposal review will be conducted only for the students who pass the qualifying exam.)

2. Students are required to prepare their thesis proposal in English, submit it to the Thesis Review Committee and make oral presentation in Korean or English.
3. Doctoral candidates should apply for and pass thesis proposal review within one year of their admission. Students in the master-doctor combined program should apply for and pass thesis proposal review within one year after they determine to qualify for the doctoral track. Those who fail to pass such review will be expelled. However, those who are recommended by their academic advisor and obtain consent of the reviewers may request reconsideration only once within six months. Those who finally fail to pass review (including reconsideration) within one year and six months will be expelled. (Students admitted prior to 2016: Doctoral candidates should apply for and pass the thesis proposal review within two years after admission. Students in the master-doctor combined program should apply for and pass thesis proposal review within two years after they are determined to qualify for the doctoral track. Those who fail to pass such review will be expelled. However, those who are recommended by their academic advisor and obtain consent of the reviewers may request reconsideration only once within six months. Those who finally fail to pass review (including reconsideration) within two years and six months will be expelled.
4. These Guidelines will apply in common to all students in the Graduate School of Medical Science and Engineering or the Biomedical Science and Engineering Interdisciplinary Program without exception, regardless of the regulations of other departments if the relevant student's academic advisor is affiliated with another department.

B. Thesis Review Committee

1. The Committee consists of a total of five reviewers including the academic advisor.
2. Two of the reviewers will be appointed from among full-time professors of the Graduate School of Medical Science and Engineering by the

Academic Review Committee of the Graduate School of Medical Science and Engineering. If the academic advisor is affiliated with another department, the co-academic advisor will be included among the two reviewers to be recommended by the Academic Review Committee. **<Amended on June 19, 2018>**

3. One (or up to two) of the reviewers will be appointed from among professors who do not work at the KAIST Graduate School of Medical Science and Engineering (i.e., professors or senior researchers who work at another department of KAIST or another university or institution).
4. The academic advisor will serve as the chairperson.
5. The report on oral presentation for thesis proposal will be prepared by the chairperson by collecting opinions of the reviewers. **<Amended on June 19, 2018>**

C. Guidelines on Preparation of Thesis Proposal

1. It should be prepared in English. The cover page should indicate the title, affiliation and reviewer. The main text should have a font size of 12 point using A4 paper with a spacing of 1.15 lines in MS Word (or 115% in Hangul software). The entire document should be at least 20 pages long, excluding references, and should be bound as a book.
2. The following items should come in order consecutively (not to start on a new page). Figures and tables should be inserted in the main text instead of being placed on separate pages. Small figures should be placed on the left side of the text, with the right side used for the main text. The figure legend should be placed below each figure. The references should not be included in the minimum 20-page requirement.
 - **Summary:** Summarize the thesis proposal within a page.
 - **Background and Significance:** Structurally explain the background and significance of the research and describe the necessity and importance of the research in comparison with the facts and experiment results known already.

- **Specific Aims:** Clearly describe the hypotheses to be discovered or verified. Set long-term objectives and describe a few detailed research goals for each objective. This should not exceed two pages.
- **Preliminary Experiments:** Describe the results and interpretation of any experiment conducted by the student.
- **Research Plan:** Describe experiment strategies by explaining reasonable grounds for a series of experimental approaches to achieve Specific Aims. Do not simply list the experiments intended. Provide a comparative analysis of various methods available and describe the expected results and interpretation.
- **Materials and Methods:** Describe the experiment materials and methods used for research.
- **References:** Use the author-date style with Endnote (available at the library).

D. Review of Research Note <Newly inserted on August 29, 2019>

1. Students should submit (print and submit in the case of electronic research notes) to the chairperson (academic advisor) the research notes prepared for the entire research conducted since admission, and the chairperson should produce these research notes to the reviewers for evaluation at the time of review of presentation.
2. Research notes should be prepared as follows in accordance with the Guidelines on Preparation of Research Notes of the College of Life Science and Bioengineering (Appendix 2).
3. Research notes should not forge or falsify the content and should only record objective facts in a detailed and accurate manner.
4. The process and results of research should be prepared to allow reenactment by a third party.
5. Research notes should be prepared with writing supplies that can preserve the records for a long period of time. Anything that cannot be directly written in the research notes (e.g., photographs or printed materials) should be affixed in the research notes in order of date. To prevent these from being replaced with other information, the student should sign and write the relevant date on the borders.

6. Anything other than the work or opinion of the person who prepares the research notes or anything quoted should clearly indicate the source.
7. To revise the content, the student should not use correction fluid and should instead strike through the content and sign and indicate the date. To revise something important, the student should indicate the reason for revision and sign and indicate the date together with the academic advisor.
8. To prevent misunderstanding that any disadvantageous information exists, the student should not damage or rip off any single page.
9. To prevent anyone from adding any information, the student should add a diagonal line across the blank space.

E. Review of Thesis Proposal

10. The student should select reviewers at the recommendation by the Academic Review Committee of the Graduate School of Medical Science and Engineering and the academic advisor and fix the review schedule in consultation with the reviewers. **<Amended on June 19, 2018>**
11. The complete book-bound thesis proposal should be submitted to each reviewer at least level days prior to the date of review.
12. Make an oral presentation using MS PowerPoint for 30 minutes in Korean or English.
13. The Q&A session will take 30 minutes or longer if needed. The questions will be directly or indirectly related to the research. The student is expected to demonstrate profound knowledge and expertise in connection with the research area, and the overall level of knowledge should meet the level required to attend and understand the department's seminars.
14. Final decision will be made after the student leaves the room through discussion and voting by reviewers. Decision will take one of the three forms: pass, fail or reconsideration. Pass requires consent of three or more reviewers out of five reviewers.
15. Reconsideration will occur with the same method within six months.

F. Thesis Proposal Review Table

The chairperson (academic advisor) should provide the review table below (Appendix 1) for evaluation. Upon collecting the results of evaluation, the chairperson should prepare a report on oral presentation for thesis proposal (KAIST form) and submit the report signed by the reviewers.

Addenda <June 19, 2018>

1. (Enforcement Date) These Guidelines shall enter into force on June 19, 2018.
2. (Transitional Measures) These Guidelines shall apply to students admitted from March 2018 and review of all doctoral thesis proposals from December 1, 2018. Students admitted prior to 2018 will be subject to the previous regulations as follows only when review is completed by November 30, 2018 2018년 이 전 입학생은 2018년 11 월 30일 까지 심사를 완료할 경우에만 다음과 같이 이전의 규정을 적용 할 수 있습니다.:
 - ① The review committee consists of a total of five reviewers including the academic advisor.
 - ② One (or up to two) of the reviewers will be appointed from among professors who do not work at the KAIST Graduate School of Medical Science and Engineering (i.e., professors or senior researchers who work at another department of KAIST or another university or institution).
 - ③ If the student's academic advisor is affiliated with another department, at least one full-time professor of the Graduate School of Medical Science and Engineering including the co-academic advisor should participate in the Thesis Review Committee. **<Amended on September 25, 2017>**
 - ④ The academic advisor will serve as the chairperson.

[Appendix 1]

Thesis Proposal Review Table

Student name:

1. Preparation of proposal

Item	Outstanding	Satisfactory	Average	Unsatisfactory	Comment
Background and Significance					
Specific Aims					
Preliminary Experiments					
Research Plan					
Materials and Methods					
References					

2. Oral presentation

Item	Outstanding	Satisfactory	Average	Unsatisfactory	Comment
Presentation materials					
Communication skills					
Q&A					

3. Preparation of research notes

Item	Outstanding	Satisfactory	Average	Unsatisfactory	Comment
Research objective, experiment materials, and method					
Raw data					
Conclusion and discussion					

4. Review results

Pass	Fail	Reconsideration

Date of review:

Reviewer: (Seal)

Report on Oral Presentation for Thesis Proposal

Responsible	Department head/ Chief professor	President
	Discretionary approval	

Applicant	Name		Student ID	
	Department/ Major		Research area	
Title	Korean: English:			
Date of review	Date:			
	Date: (for reconsideration)			
Result	Pass		Fail	
<u>Comment:</u>				
(Use the other side if you need more space.)				

Date:

Thesis reviewers Chairperson: (Seal)

Reviewer: _____ (Seal)

Reviewer: _____ (Seal)

Reviewer: _____ (Seal)

Reviewer: _____ (Seal)