TIGP - CBMB

Qualifying Examination: Thesis Proposal Exam Regulation (MB Track)

I. Overview and Guidelines:

a. Effective from the **academic year 113. Apply to the MB track students enrolled after academic year 112 (2023 Autumn)**. Ph.D. students are eligible to apply to take thesis or thesis-related proposal examination as a qualifying examination, and must pass the qualifying examination before the end of their fourth semester of study (31 July if enrolled in the autumn semester; 31 January if enrolled in the spring semester) including the make-up examination.

b. The proposal must be original, as acknowledged by the supervisor. It is the Supervisor's responsibility to endorse the application.

c. Students must submit an application form and a one–page abstract to the CBMB Program Office before 30 November (if enrolled in the autumn semester) or 30 May (if enrolled in the spring semester) in the third semester.

d. After the application is approved, the proposal should be submitted to the exam committee and the program office at least **two weeks** before the oral examination. The oral exam must be completed by 31 March (if enrolled in the autumn semester) or by 30 September (if enrolled in the spring semester) in the fourth semester.

e. There will be punishment for missing the deadlines. For example, those who miss any of the deadlines listed below will receive a "fail" for individual violations. When accumulating two fails (including the exam result), students will not be allowed to take the qualifying examination, which means that they will not be able to continue in the program.

Task /Deadline	If enrolled in the autumn semester	If enrolled in the spring semester
Abstract and application form submission	30 November	30 May
Full proposal submission to the Examination Committee and the program office	At least two weeks before the oral exam	
Oral exam completion	31 March	30 September

f. The student must confirm with the CBMB Program Office his/her oral examination schedule at least **three weeks before his/her presentation schedule**.

g. The Office encourages all students to start preparing for the examination as early as possible. The earlier you start, the more time you will have for your preparation. The student takes the responsibility and consequences for not arranging his/her time properly.

h. The thesis advisor and/or the co-advisor have to guide the student without specifying the proposal aims.

II. Examination Committee

a. The student's thesis advisor (and co-advisor) should not serve on the Examination Committee. The thesis advisor (and co-advisor) cannot attend the close door presentation.
b. The student can recommend 1-3 suggested exam committee on the application form. But the exam committee is formed and decided by the academic affairs committee. At least 50% of the committee members should be CBMB faculty. The chair should be a CBMB faculty.
c. Two more professors can be invited by the academic affairs committee if the student take the make-up exam.

III. Make-up Examination

a. One make-up examination is permitted if the student fails the first examination (by 31 March or 30 September) when the student does not violate any rules or deadlines previously. The examination must be completed before end of the student's fourth semester.
b. The schedule of the make-up examination should be confirmed by the qualifying exam committee in the oral examination.
c. Two more professors can be invited by the academic affairs committee if the student take the make-up exam.
d. Within one week after the oral examination, the student should confirm with the Program Office whether or not he or she will do the make-up examination on the same topic or on a new topic with his or her advisor copied in the email. If the student is proposing a new topic, the student will be required to the application again. If necessary, the academic affairs committee can reform the qualifying examination committee.
e. The student should pass his/her qualifying examination by the end of the fourth semester.

IV. Oral Presentation

The student should give an oral presentation based on the proposal in English. Each member of the examination committee will indicate "pass" or "fail" on the student's oral examination form. The student must get a majority of pass votes in order to pass the qualifying examination.

V. Evaluation Criteria

The examination committee will assess the student based on his/her performance during the examination. The evaluation will be based on creativity, logic, feasibility, research approach, background knowledge, PowerPoint presentation, oral presentation, and response to questions.

VI. Thesis proposal Format

The proposal should be written in English with a maximum of 15 pages excluding reference in length. The proposal should include a title with no more than two lines, an abstract, research background and motivation, specific aims, and the approaches to be taken to achieve the specific aims. See Guidelines below for Preparing a Thesis Related Proposal for more information.

Guidelines for Preparing a Thesis Related Proposal

The format of the proposal is **12-point type throughout, Time New Roman black font, single spacing with 2.5 cm margins on all sides.**

The proposal should contain the following elements:

a. Title
b. Abstract
c. Specific aims
d. Background/Significance
e. Experimental design and methods
f. Discussion
g. References

Specific Instructions

a. Title Page: (including a title, your name, the date and time of the examination)
The title should be fewer than two lines in length. It should reflect the central theme/study.

b. Abstract: (1 paragraph, no more than one page)
The abstract is a paragraph conveying the concept and significance of the work. It should briefly and concisely describe background information, the significance of the study, and approaches taken to address these issues/aims. References should not be cited in the abstract.

c. Specific Aims: (No more than 1/2 page)
State concisely the goals of the proposed research. List 2-4 aims that are achievable within three years. Each aim should be stated in one or two sentences. Specific aims should reflect the central theme and questions/issues to be examined. They can be from hypothesis testing, creation of novel designs, solutions for specific problems, challenges of existing paradigms, clinical practices, or critical barriers to progress in the field or development of new technologies. Students may summarize the expected outcomes and the impact of the proposed research at the end.

d. Background and Significance: (maximum 3 pages)

Provide a sufficient introduction to the area of research, including a rationale for the proposal as suggested below:

- Critically evaluate existing knowledge and explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses. State concisely the importance of the proposed research by relating the specific aims to the broad and long-term objectives.
- Explain how the proposed project will improve scientific knowledge,

technical capability, and/or clinical practice in one or more broad fields.

- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

e. Experimental Design and Methods: (3-6 pages)

Describe the experimental approaches for achieving the specific aims listed above and explain the rationale for each experiment in sufficient details.

- List each "Specific Aim" and describe the experiments/methods and controls (without intricate details) to be carried out to achieve the "Specific Aim".
- Explain the rationale for each experiment and how the experimental outcome will verify your hypothesis/questions.
- Describe how the data will be collected, analyzed and interpreted.
- Discuss the potential difficulties and limitations of the proposed experiments/methods and propose alternative experimental approaches.

f. Discussion: (1-2 pages)

Speculate the possible outcome (positive or negative) and their scientific implications. Propose additional experiments/approaches for each outcome to verify or further advance the scientific knowledge.

g. References:

A complete list of authors, year, title, journal and pages must be given. The "Journal of Molecular Biology" style as shown in the examples below, is recommended.[1,2]

1. Abouzied, M. M., Baader, S. L., Dietz, F., Kappler, J., Gieselmann, V. & Franken, S. (2003). Expression patterns and different subcellular localization of growth factors HDGF and HRP-3 suggest functions in addition to their mitogenic activity. *Biochem. J.* 378, 169-176.

2. Abragam, A. (1961). The Principles of Nuclear Magnetism, Chap. VIII pp. 164-322, Clarendon Press, Oxford, UK.