

For proposal preparation:

1. Read broadly, and think deeply.
2. Try something daring and creative. Avoid me-too type of project.
3. Think about the possible approaches to address the questions. You may formulate a hypothesis-driven mechanistic study based on published data. However, you also need alternative approaches. Make sure that you are writing a proposal to find the answer for an interesting question, but not a manuscript with known results.
4. Be prepared to defend the feasibility and significance of your proposal.
5. Consult and discuss with your thesis advisor.

For proposal writing:

1. Format of qualifying examination proposals:
  1. Specific Aims
  2. Background and Significance
  3. Experimental Design and Methods
  4. Anticipated Results
  5. Discussion
2. Describe the rationale of why you chose the research topic(s) and how you would test the hypotheses.
3. Design and describe appropriate experimental methods, without being limited to familiar methodologies, and always include proper controls.
4. Use the grant proposal format of National Science and Technology Council as a guide.
5. Don't be too ambitious; aim for a study that can be completed in about 3 years.
6. Page limit for content of proposal is 25 pages. Use Times New Roman font, 12-point type, and single-spacing. The proposal should have page numbers and figures should have figure legends. The format for references should follow that of the journal "Cell" or "Nature" consistently.

For presentation:

1. You should prepare your presentation slides for a 20-minute talk (without interruption).
2. The presentation format with Q&A will be determined by your QE committee.

Criteria for the QE: applied on both the proposal writing and performance during the exam.

The QE will be evaluated based on: 1) background knowledge; 2) rationale, originality and feasibility of your proposal; and 3) presentation skills.

For the students taking the thesis proposal, your preliminary data is encouraged to be included to show the feasibility of your proposal.

## REMINDERS TO THE COMMITTEE BEFORE THE EXAM

If you have an unexpected schedule conflict and cannot attend the arranged exam, you need to inform the TIGP-MCB program office at least 72 hours before the exam. TIGP-MCB Curriculum committee will try to find a replacement committee member and notify the exam committee chair. If no replacement member can be found in time, 4 committee members will conduct the exam and must form a consensus to have a pass/fail result.

If the chairperson is unable to attend the exam, the other four members shall elect a new chair among themselves.

If two members cannot attend the exam, the TIGP-MCB office will reschedule the exam.

Committee chair: please read out the reminders to the committee before the exam.

### **QE rules:**

1. Criteria for QE: 1) background knowledge, 2) rationale, originality and feasibility of the proposal, and 3) presentation skill.
2. Please decide the QE result with "pass" or "fail." If a "pending" decision is reached, the final decision-making shall be finalized within two weeks.
3. The key responsibility of committee members is to make the decision if the student is qualified for the Ph.D. candidacy.

### **To do:**

1. Try to be constructive
2. Balance the question of focus
3. Ask the student about the big picture (significance of the proposed research)
4. Make the student less nervous
5. Judge whether the student is suitable for PhD study.

### **Not to do:**

1. keep pounding on single issue for too long
2. get upset or impatient
3. ask for perfection, (they are 2nd year PhD students)
4. ask for trivial experimental conditions

### **Others:**

If the student fails the exam, the committee shall provide specific guidance to help the student retake the exam.