

➤ Qualifying Examination Guidelines

Updated by 2020/05

I. Purposes

The qualifying examination with thesis proposal in the TIGP-INS program consists of two components: a written document describing the student's proposed research plan related to topics in his/her PhD thesis and an oral defense of the experimental approaches in the proposal. The examination serves several purposes. First, it is to assess whether the student has the appropriate and broad knowledge to pursue independent thesis research. Second, it is also to evaluate whether the student has the ability to formulate a detailed research plan to answer the proposed questions. Finally, it will provide experience for the student to write a proposal with a rational experimental design to achieve the proposed aims and orally defend the research plan.

II. Requirements

- (1) Students must pass all required courses in the first year:
 - i. Introduction to Neuroscience (*3 credits*)
 - ii. Neuroscience Seminar (*2 credits*)
 - iii. Interdisciplinary Neuroscience Lecture (*2 credits*)
 - iv. Laboratory Rotations (*2 credits*)
- (2) Thesis advisors confirmation (completed the Thesis Advisor Record Form).

III. Format of the Qualifying Exam

The examination for admission to candidacy should take place no later than January 31 of the second year. For student entering with a bachelor's degree, the examination for admission to candidacy should take place no later than January 31 of their third year (the second year of their Ph.D. program). Students need to submit an "abstract" and "a full thesis proposal" prior to the "oral defense of the proposal".

- (1) First-year students should submit the qualifying examination application with an abstract of their doctoral research project by 5:00 PM on June 1.
- (2) Upon approval of the abstract, **seven hard copies and an electronic copy (pdf format) of the FULL thesis proposal** for the Qualifying Examination Committee should be submitted to the TIGP-INS Office by July 31. Please note that there will be **NO EXCEPTIONS** to this deadline. Students who do not turn in their full thesis proposal on time will not be permitted to take the oral part of the examination, and will be given a failing grade for their first qualifying examination. Thesis advisors should not be involved in any of the writing process, including editing.

(3) The oral presentation should take place by **September 30**. This will consist of 40 – 45 minutes of oral presentation by the student, followed by questions from the members of the Qualifying Examination Committee.

(4) Applicants may apply for re-examination due to the following reasons:

- i. Failure to pass the required courses in the first year
- ii. Thesis advisors have not been chosen in the first year
- iii. Failure to successfully complete the qualifying examination on the first try.

(5) For re-examination, the student must apply by **November 1** of the second Ph.D. year, submit a thesis proposal by **December 31**, and finish the oral defense by **the end of February**.

(6) **Application for postponing the qualifying examination** (excluding students entering INS with bachelor's degrees who are allowed to take the exam after the second year):

Students may apply to postpone the exam for a half year with following reasons:

- i. **Students received both B.S. and M.S. degrees in five years.**
- ii. Students received the degrees with majors not related to biology (such as engineering or humanity studies).
- iii. Other unavoidable conditions (e.g.: long leave due to sickness, change of lab advisor before the exam, etc....)

The application for postponing the first exam must be initiated by advisors who can contact the office before filing the application. The specific reasons have to be clearly described. **The application should be submitted along with the thesis advisor Record Form by June 1. The application will be reviewed and approved by the committee, and there is no assurance that the application will be granted.** Every student can only apply once for postponing the qualifying exam.

If the application for postponing the exam is granted, the students are required to apply for the exam by **November 1** in the second Ph.D. year, and submit the thesis proposal by **December 31**, and finish the oral defense by **the end of February**. For re-examination, the student must apply by **June 1** in the second Ph.D year, submit a thesis proposal by **July 31**, and finish the oral defense by **September 30**.

Qualifying Examination Timetable in a Glimpse	
Requirement	Deadline
1. Submit a qualifying examination application, including the title and abstract of your thesis proposal	Before 5:00 PM on June 1 of first Ph.D. year
2. Submit a FULL thesis proposal to the TIGP-INS office	Before 5:00 PM on July 31 of first Ph.D. year
3. Finish the oral presentation	On September 30 of the second Ph.D. year

*If you enrolled with a master's degree on September of 2013, the first Ph.D. year starts from August 1, 2013 and ends in July 31, 2014.

*If you enrolled with a bachelor's degree on September of 2013, the first Ph.D. year starts from August 1, 2014 and ends in July 31 of 2015.

IV. Qualifying Examination Committee

The Degree Examination Committee will select five to seven experts as members of the Qualifying Examination Committee and appoint one of the members as the committee chair. Thesis advisors cannot be included in the Committee.

V. Standards for Passing the Qualifying Examination

- (1) Two-third (including two-third) of all attending committee members must vote to pass **AND**
- (2) The students must receive a grade point average of at least 70 (out of 100 points) on the qualifying examination.

VI. Outcomes of the Qualifying Examination

Grade of Qualifying Examination	
Pass	The committee feels that the student has met expectations and passed the exam, as determined by the standards described in Section V. The student will now be qualified as a Ph.D. candidate in the program.
Conditional Pass (First exam only)	The committee feels that the proposal only needs improvement in writing. The student will have 2 weeks to rewrite the proposal and resubmit it to the committee for approval.
Fail*	If the committee feels that the student's performance is unsatisfactory, he/she may be given an opportunity for reexamination.

*If the student is not offered re-examination, or if the student's performance is judged unsatisfactory on the re-examination, he/she should withdraw the TIGP-INS program.

VII. Writing your Thesis Proposal

The thesis proposal should consist of the following components in order. The text should be typed in Times New Roman 12-point font and be single-spaced. The main text (not including pages of title, abstract and references) of your proposal should not exceed **12** pages.

- (1) Abstract (1 page): Briefly describe the background that leads to the specific aims to be achieved and any hypotheses to be tested. Briefly mention approaches that are to be used to accomplish the above goals.
- (2) Specific aims and hypotheses to be tested (1 page): Briefly describe the background. Summarize the major goals of this proposal and what specific research aims are to be accomplished. State any hypotheses to be tested and briefly describe what approaches are to be used.
- (3) Background review and significance (2-3 pages): Briefly describe the background and bibliography of major references of this proposal. Critically evaluate present knowledge related to this proposal and specifically identify the gaps in which this proposal is intended to fill. State concisely the importance and significance of the research described in this application by relating the specific aims to the overall goals of the proposal.
- (4) Research design and methods (no more than 6 pages): Describe the research design and the procedures to be used to accomplish the specific aims of the proposal. Describe the rationale of why your designs will accomplish the aims of the proposal. Include how the data will be collected, analyzed, and interpreted. Describe any new methodology and its advantage over existing methodologies. This section should NOT be a compilation of procedures and methods. It should be written in such a way that original ideas, concepts, hypotheses, innovative strategies, and research design and methods can be readily delineated.
- (5) Anticipated results and possible difficulties (1 page): Briefly describe what anticipated results would satisfy the original hypothesis and how these results would be important for planning the next steps in the proposal. Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims.
- (6) References