

# Student Guidelines for PhD Comprehensive/Qualifying Exam

**Format:** Oral

**Pass/Fail:** The comprehensive exam will be graded by a majority vote of the examining committee.

- (i) **Timing:** For all PhD candidates, the qualifying examination must be held within 36 months of entry into the program, however, preferably within 24 months. It should be scheduled so that there is enough time meet additional requirements if the student receives a "conditional" PASS.
- (ii) **Purpose:** The qualifying examination is intended to test the student's understanding of their chosen field of study as a whole, and the student's preparation for the thesis research to follow.
- (iii) **Preparation:** Each candidate is required to submit a written thesis proposal, limited to 25 pages double-spaced, not inclusive of figures or references, to each member of their Thesis Supervisory committee **at least two weeks** before the exam. The candidate is expected to review the literature and discuss the general nature of unsolved problems in their research area, and to propose a series of questions, and experimental ways to answer them. Committee approval of the research plan will require a separate meeting, held at least one month prior to the exam itself. This committee meeting must be documented and a committee meeting report signed by all members of the committee, and by the student, agreeing that the proposal is ready to be examined.

Once the research proposal is accepted, the Chair and each member of the Examination committee will be given a copy **at least two weeks** before the examination. In addition to the research proposal, the candidate will also provide the Chair and Examination committee with the most recent copy of their CV. The Chair is a GSAT Faculty member, not on the student's committee. The Examination committee is usually the same as the student's Supervisory committee.

The qualifying examination itself will test the candidate's knowledge and comprehension of the literature relative to the research proposal, and the candidate is expected to be able to discuss any other areas closely related to their own research. This examination will not be limited to the specifics of the project proposal and will test the candidate's ability to formulate hypotheses and design tests of them. The exam is not designed to test merely factual recall. The candidate will be expected to reason on their feet, and to integrate fundamental principles of research.

Students should ask their committee members what topics are likely to be covered during the exam, and ask for recommendations regarding books, reviews and specific papers.

- (iv) **Format of the Qualifying Exam:** The examination consists of the presentation of the research proposal, followed by questions from the examining committee. The questions are to address both the specific research topic of the thesis, and topics related to the general subject area of the proposal.

A two-hour period is scheduled for the examination, the first 15 minutes of which are devoted to the presentation of the proposal. Under no circumstances will the presentation be allowed to exceed 20 minutes. The Chair will announce the order of the examiners, followed by the candidate's presentation. Each examiner will be given about 20 minutes to pose questions. The supervisor does not pose any questions at the exam.

Once the examiners have had one round of questions, the Chair will ask each examiner, in the same order, if they have any further questions.

**Advice to Students:** If you don't know something, say so. If you don't understand the question, ask for it to be repeated, or rephrased. If you think you understand, but aren't sure, ask something like "Are you asking about X, or about Y?" Being asked hard questions that challenge you is a sign the exam is going well. If you don't know an answer, but think you can make an informed guess, say something like "I don't know the answer, but based on the analogy to system X, I would predict Y". You will be credited for your willingness to make an informed guess.

- (v) **Results:** Following the examination, the candidate will be asked to withdraw from the room. The Examination committee will then discuss the candidate's performance and vote to pass or fail the candidate by secret ballot. The decision will simply be the majority. In the case of a tie, the Chair will cast the deciding vote. The Chair will then recall the candidate, and announce the result of the decision. The Chair may also comment on the strengths and weaknesses of the performance.

**Important Note:** If the student entered as a PhD candidate, upon failing the exam, they will be permitted one, and only one re-examination. The second oral exam should be held within 3 months of the first exam. If a student has transferred from an MSc program to a PhD program, upon failing the exam, they will not be admitted to the PhD program and will not be allowed to continue the completion of their MSc degree either.