

Anatomy and Structural Biology Program

Ph.D. Qualifying Exam Procedure

All the students pursuing the Ph.D. degree are required to pass the qualifying exam to continue their Ph.D. work.

The objective of the qualifying exam

Qualifying examination (QE) aims to evaluate the student's foundation in Anatomy and Structural Biology that will enable the student to carry out research in a chosen field of study. Moreover, the QE evaluates the student's competency in preparing and conducting a research proposal.

To pass the QE, a student must express fundamental knowledge and demonstrate ability to analyze and apply existing knowledge in order to develop new research rationales and design related experiments to address scientific questions.

Format of the Exam

The qualifying examination consists of

1. **“QE paper”**, which is a critical literature review in an assigned topic (**combined 3 main original articles; ranked Q1-Q2**) with critical analysis of the literature, summary of conceptual frameworks from the existing knowledge and research findings, and proposed future research direction in the area;
2. **Written examination** related to the QE paper submitted;
3. **Oral defense** of the QE paper.

The QE paper must be prepared and written by the candidate himself/herself. The writing of a paper must be 15-20 pages with 1.5-spaced in length and one-inch margins on all sides, excluding abstract, figures, tables, and references.

For the written examination and oral defense, the exam committee members will ask questions about the examination theme and other topics related to the student's basic knowledge in the coursework.

Request for Qualifying Exam

To register for the Ph.D. qualifying exam, a student must submit a completed application form to the program officer. The application form includes the name of the student's advisor, academic background, current thesis topic, classes taken to date and grades (transcript), TOEFL or IELTS score, and a one-page abstract of the thesis research.

The student must present to the exam committee **a topic of interest that “may be” or “may not be” related to the research field of his/her thesis proposal, but not directly relevant to his/her thesis topic**. A one-paragraph abstract and an infographic illustrating the conceptual framework must also be provided.

Qualifying Exam Committee

The program chair appoints the student to draw four faculty program members as the qualifying exam committee. One of whom will be selected as the chair of the committee. The student's major advisor must not be included in the committee.

Selection of the Topic

A student must present a **topic of interest**, an abstract, **keywords, an infographic illustrating a conceptual framework, and the 3 original articles related to the topic** to the qualifying exam committee. **The topic must be approved by the qualifying exam committee before the student begins writing.**

Arrangement of the examination

It is the student's responsibility to arrange for the written and oral examination dates with the committee and to arrange for the room with the officer. The student must complete the literature review paper within 4 weeks from the time the topic is chosen by the committee. A file containing the work in Word format (.doc or .docx) must also be given to each of the members of the committee for plagiarism checking. The committee will have two weeks to evaluate the written document and provide questions related to it as a written exam by the end of week 6. After the written exam, the student will have two weeks for the oral defense preparation of the qualifying exam. Oral defense should **not** exceed an hour of the presentation.

Exam Schedule

Student is highly recommended to register for the QE at the timeline suggested by the Program. Students holding M.Sc. must register for the QE **by the early of the 3rd/4th semester**. Students holding B.Sc. must register for the QE **by the early of the 4th/5th semester**.

Students must **finish** the exam **before the end of the fifth semester** of the graduate study. If the exam result is "**Fail**", the exam may be re-taken **once within 6 months** of the first examination.

A student who has not passed the qualifying exam by the end of **the 7th semester** will be considered as "not making satisfactory progress" toward the Ph.D. degree.

Evaluation of the Exam

The qualifying exam committees decide whether the student has passed or failed according to the qualifying exam evaluation rubrics.

A minimum of 70% is required to pass **the QE paper part** of the qualifying exam.

A minimum of 70% is required to pass **the written exam** of the qualifying exam.

A minimum of 70% is required to pass **the oral defense** of the qualifying exam.

The decision will take place after the oral defense in the absence of the student. The committee will sign an evaluation form (with comments/recommendations, if any) and return it to the Program chair right after the oral defense.

In the case of a re-exam, if the student does not pass, he/she will not be permitted to continue in the Ph.D. program. Such a student can be allowed to continue to study for an M.Sc. degree.

An evaluation will be based on the major areas: critical analysis of the literature, summary of conceptual frameworks from the existing knowledge and research findings, and proposed future research direction in the area. The committee will evaluate each student and write their comments on an evaluation form according to the rubrics set by the faculty program member. The discussion among the committee will be done after the oral defense. The student will receive the result and feedback (recommendations) summary after the exam from the chair of the committee.

Possible Results

On the basis of the written document, written examination, and the student's performance in the oral examination, the committee will decide upon one of the following four outcomes:

a) Pass;

b) Pass with conditions;

In this case, the committee will outline the weakness and how the conditions the student could (or must) fulfill before reconsideration. The student will be assigned some candidacy paperwork and have 2 weeks to fulfill the conditions. After the conditions have been fulfilled, the committee will reconsider the result from "Pass with conditions" to "Pass".

c) Fail with re-examination. (Be appropriate when the committee believes that the student's performance will be improved if the student is aware of his/her weak points and tries their best in the re-examination). For a re-examination, the topic may be the same or different from the first one, under the committee's consideration.

d) Fail. (Be appropriate when the committee makes a decision that the student's overall performance in the examination indicates that he/she does not have strong prospects of successfully completing the Ph.D.).

Time line for Ph.D. Qualifying Examination

: By the early of the 3rd/4th semester (for students holding M.Sc.) or 4th/5th semester (for students holding B.Sc.)

0	<ul style="list-style-type: none"> * Submit QE application form * Topic is approved by the committees.
Week 4	<ul style="list-style-type: none"> * Submit written paper
Week 5	<ul style="list-style-type: none"> * Committee meeting: Evaluation of the written paper : Set up the written examination questions. (8 questions, 20 points each)
Week 6	<ul style="list-style-type: none"> * Written examination (6 hours limit)
Week 7	<ul style="list-style-type: none"> * Committee meeting : Result of the written exam
Week 8	<ul style="list-style-type: none"> * Oral defense : Result of QE announcement

Week 10 * If a pass with a condition is applied, the student must complete the conditions by the end of week 10.

Remark: If a student fails the re-exam, the student must complete the QE re-exam within 6 months.