A Guide for Biomedical Science Graduate Students Preparing for a Qualifying Exam

Function
Candidates for the PhD degree must satisfactorily complete a qualifying exam, the purpose of which is to ensure that students have a general understanding of the biomedical sciences and sufficient knowledge in their chosen area of thesis research to proceed towards the PhD degree in a timely manner.

It is expected that students will have completed most program-specific course requirements prior to taking the qualifying exam. Successful completion of the exam marks a student’s transition to the independent research phase of his/her graduate training.

Responsibilities
The student who seeks to advance to candidacy for the PhD degree must take full responsibility for preparation for the exam. Students are expected to be scientifically conversant in their chosen discipline, to demonstrate creative and critical thinking about their proposed studies and to adhere to the highest standards of intellectual and professional integrity. Each student must use the course of thesis research planned with his or her mentor and advisory committee as the starting point for preparing for the qualifying exam. During the exam, the student must demonstrate an understanding of the underlying principles and context of the proposed work; the recitation of experimental details is of less importance and will not lead to successful completion of the qualifying exam. A demonstration of scientific depth and breadth of understanding will give the examining committee confidence that the student is ready to embark on his/her academic journey toward the PhD degree.

The mentor is the most important person in a graduate student’s training. By choosing a faculty member as thesis mentor, the student signals an alignment with the mentor’s scientific vision. Therefore, the mentor will work with the student to articulate mutually agreeable scientific aims and provide guidance and recommendations on the development of the experimental approach. However, mentors know that the student is responsible for the crafting of a document that speaks in the student’s voice. Mentors also understand that it is not their ideas that are being examined, it is the student’s understanding of these scientific ideas and the student’s potential to conduct the proposed studies. Mentors who actively engage with their students from the onset of training will provide them with the best preparation for the qualifying exam.

It is the responsibility of each advisory committee to decide whether it is in the best interests of the student, the laboratory and the PhD program for the student to embark upon a course of thesis study. The successful completion of a PhD thesis requires substantial commitment, time and resources on the part of the student as well as the mentor, faculty and institution. The advisory/examining committee
must balance the following criteria in rendering judgment on whether the student will be admitted to candidacy:

Students are expected to be conversant in their chosen area of scholarship including, but not limited to, their thesis project. Students may be examined on their understanding of topics covered in graduate coursework, aspects of their specific field of study, as well as the principles and practice of techniques included in the thesis proposal.

The examining committee must judge the extent to which the written document is the student’s work and weigh their evaluation of it accordingly. The key responsibility of the examining committee is to judge whether the student’s oral defense of the written thesis proposal demonstrates critical thinking and creative approaches to the proposed studies.

In summary, the examining committee must decide whether to admit the student to candidacy for the PhD, hold the student for reconsideration by failing them on the first exam but inviting them to attempt a second exam or close the door succinctly at the first exam and direct them to another professional endeavor.

**Format**

Each independent program determines the format of the qualifying exam. This includes the content and format of the qualifying exam document, as well as the oral presentation and closed exam.

Each program has a [student handbook](#) that outlines the rules, regulations, processes and procedures for the qualifying exam. The sooner the student is familiarized with the requirements of the specific program, the better prepared he/she will be to take the qualifying exam.

**Deadline**

The School of Medicine and Dentistry has set an annual deadline of October 15 to take a qualifying exam. This applies to all biomedical science students in their 5th semester of study. Some programs have set earlier deadlines; check your [program handbook](#) for your specific deadline requirement. Exceptions to the October 15 deadline, as a result of unusual circumstances, may be approved by the Senior Associate Dean for Graduate Education.

**Advisory/Examining Committee**

The committee to conduct a qualifying exam must consist of four current full-time tenure-track faculty members appointed at the assistant professor rank or higher. Two members must have primary appointments in the department of the student’s major. One additional member must have a primary appointment in a department other than that of the student’s major, and the last member can be from any department or academic unit.

Research track faculty, lecturers, adjunct faculty, visiting professors, scientists, postdoctoral appointees or other titled members of the faculty are not eligible to participate as members of an advisory
committee without prior approval of the Senior Associate Dean for Graduate Education and the University Dean for Graduate Studies.

In the case of interdisciplinary programs such as Neuroscience, Pathology and Toxicology, two members must be appointed to the program’s core list of faculty and one member must not. The last member can be from any department or academic unit.

One guest member may be appointed to an advisory committee with the approval of the Senior Associate Dean for Graduate Education and the University Dean for Graduate Studies. Such guest members are generally recognized as experts in their field but not necessarily members of a university faculty (e.g. person with a position in industry). The guest member may either replace or be in addition to the usual outside committee member.

**Advisory Committee Meetings**

It is highly recommended that students meet with their advisory committee to discuss the development of their research question/project prior to writing the thesis proposal and prior to scheduling the qualifying exam. This meeting must be documented with an Annual PhD Student Evaluation/Progress Report form.

**Scheduling the Exam**

The date and time of the qualifying exam must be arranged and confirmed with the student’s entire advisory committee.

As soon as the date and time have been confirmed, the graduate program coordinator must be notified. The graduate program coordinator schedules the room(s) required for the qualifying exam and prepares paperwork for submission to the Senior Associate Dean for Graduate Education.

**Qualifying Exam Paperwork**

Although the paperwork seems to be a time consuming and difficult part of the qualifying exam process, it really involves only 4 documents:

1. **Appointment Form for PhD Qualifying Exam** announces date, time, and location of the exam, the student’s program, committee members and proposal title. This form is prepared by your graduate program coordinator and signed by the graduate program director.

2. **Program of Study for the Degree Master of Science** lists completed courses and grades earned that satisfy the course work requirements of the Master’s degree. This form is prepared by your graduate program coordinator and signed by the graduate program director and the Senior Associate Dean for Graduate Education.

3. **Proposal Title Page** is a cover page for the thesis proposal abstract. It is one page in length and it is usually not numbered.
4. Proposal Abstract is a graduate student's statement of intention. It is an outline of a proposed research project that is presented to an advisory committee for approval. The length and format of the abstract is determined by each graduate program.

Paperwork Due Date
Paperwork for the qualifying exam is due to the Office for Graduate Education and Postdoctoral Affairs at least 10 full working days prior to the exam. If the paperwork is late, students will be required to select a new date.

Qualifying exam paperwork is reviewed to ensure that all required information has been provided, including the appropriate department/program signatures. An audit of coursework and research is then completed to determine if all requirements for the Master’s degree have been satisfied. If the audit is satisfactory, the program of study is approved by the Senior Associate Dean for Graduate Education. The Senior Associate Dean for Graduate Education also reviews the proposal abstract and the composition of the advisory committee and determines which member will serve as Chair for the exam.

Prior to the Exam
The student is required to distribute the thesis proposal document to the exam committee in sufficient time to allow the qualifying exam Chair to request feedback from all committee members to determine the acceptability of the thesis proposal document. If the Chair determines that each member of the committee finds the thesis proposal document to be of sufficient quality, the exam proceeds. An affirmative answer means only that committee members find that the proposal is sufficient on the whole and does not commit to agreement with every sentence or paragraph. Moreover, an affirmative answer that the document is of sufficient quality to defend does not preclude changes to the document after the exam.

If the thesis proposal document is determined by the committee not to be of sufficient quality, the student may be asked to make revisions and to reschedule the exam for a later date.

The Exam
The student is expected to present an overview of the thesis research proposal for the first 20-30 minutes. The committee then commences the oral examination. A typical exam will take between two and three hours. The student is judged on several criteria: the written and oral presentation, a grasp of fundamental research issues, the ability to apply the background from formal course work to problems related to the proposal and a demonstration of critical assessment of results. It is important to recognize that while the written proposal serves as a focus for the oral exam, questions about peripheral research-related areas will be raised.

Outcomes to the Exam
The advisory committee will determine if the student has passed the exam, passed pending modifications to the thesis proposal or did not pass the exam.
• If the student passed the exam, he/she will earn the Master’s degree associated with the PhD degree. The student is admitted to candidacy for the PhD degree*.
• If the student passes pending modifications to the thesis proposal, he/she will be given 14 calendar days after the exam to make necessary revisions.
• If the student did not pass the exam, he/she may be granted an opportunity to take a second exam. This is determined in consultation with the advisor, program director and the Senior Associate Dean for Graduate Education.

*As a result of unusual circumstances, the advisory committee may determine that although the student has passed the qualifying exam, the student should not be admitted to candidacy for the doctoral degree. The student’s program of study would be terminated at this point. A terminal Master’s degree would be earned.