

# **Guidelines for Administering Graduate Student Qualifying Examinations**

## **Doctoral Qualifying Exam**

Graduate students pursuing a Doctoral Degree in Pharmaceutical Sciences will be administered a Qualifying Examination for Admission to Candidacy. The examination is intended to test the student's ability to apply the scientific process to the study of a specific problem, and will evaluate the student's overall knowledge, comprehension, analysis, synthesis and evaluation. Failure to successfully complete the qualifying examination will be cause for dismissal from the program.

The Qualifying Examination shall consist of two parts, written and oral, as defined below. The Qualifying Exam will be administered once a year, beginning in the late spring, to students who have completed the Graduate Program in Pharmaceutical Sciences (GPPS) core curriculum, usually in the spring of their second year of study. The written and oral components must be completed within the timeline detailed below.

## **Written Qualifying Exam**

- 1) Written examinations will be administered annually, beginning in the late spring, following completion of the student's graduate core curriculum.
  - a) The student will be required to write a NIH R21 grant proposal based on the student's research interest. The topic of the proposal must be novel and original, and should not be overlapping with previous, active or planned research by the Mentor. The student must include a brief statement from the Mentor stating how the student's research proposal differs from past or existing grant proposals submitted by the Mentor.
  - b) A committee consisting of one member of the GPC plus the Student's Advisory Committee, hereafter called the Grading Committee, will grade the proposal. The GPC member, who may not be a member of the student's Advisory Committee, will chair the committee. The student, in consultation with the Mentor, will choose the GPC member. A single GPC member cannot chair more than two committees. In case of significant overlap among GPC members and student's advisory committee, the Graduate Program Advisor, in consultation with the student and mentor, will appoint one member, who is not a GPC member, to chair the student's Grading Committee
  - c) The student must first submit the following item to the Graduate Program Coordinator (with a CC to the Regional Program Coordinator) as a single PDF document: A title for the proposal, a one-page Specific Aims, and the statement from the mentor as mentioned previously. Following receipt, the Coordinator will forward the document to the Grading Committee for approval of the topic. Such document must be submitted by close of business on the second Friday of May.
  - d) Members of the Grading Committee will submit their recommendation (favorable/unfavorable) to the Grading Committee Chair, who will notify the student and the Graduate Program Coordinators. Approval of the topic and student notification must be completed by the last Friday of May. Should Approval be denied, the Grading Committee is mandated to provide recommendation and guidance to the student, who will submit a revised document for approval by the Grading Committee. The revised proposal must be submitted within two weeks. The student will have one month to prepare the full proposal. The written proposal must be submitted as a single PDF file to the Graduate Program Coordinator (with a CC to the Regional Program Coordinator) by the first Friday in July. In the event that the first Friday in July is a holiday, the deadline will be the following Monday. Failure to turn in the full proposal on time without any valid reasons will automatically set the student to be dismissed from the program, unless the Mentor or Student provides valid reasons not to do so.
  - e) Each member of the Grading Committee will fill a summary statement following a template document provided by the Graduate Program Coordinator, which is representative of a NIH reviewer template. The Grading Committee Chair will consolidate all these statements in an anonymous manner into a single summary review statement and communicate such summary

directed to the student. The Committee will vote on the proposal either to “approve to advance to oral exam”, or “disapprove to advance to oral exam” and the Chair will notify the student and the Program Coordinators of the Committee’s decision. In order to advance to the oral exams, there may be no more than two ratings of “disapprove”. To avoid bias, the committee members or mentor should not to discuss their rating with other committee members before the committee meeting.

- f) The Grading Committee Chair must inform the student of the outcome of the Written Qualifying Exam proposal on or before the third Monday in August. If the student is approved to advance to the Oral Qualifying Exam, the student can request to meet with the Chair of the Grading Committee to discuss the strengths/weakness of the proposal to assist the student in preparation for the oral exam.
- g) All students with disapproval to advance must prepare a written response to the comments of the Grading Committee, and make appropriate changes in the written proposal using the summary statements of the Grading Committee as a guide.. The Grading Committee may call for a meeting with the student to discuss the reason of the decision and provide guidance to remediate the written proposal. The response and the amended proposal must be submitted to the Grading Committee Chair and Graduate Program Office no later than the fourth Monday in August. The Grading Committee will evaluate and vote on the revision as above. If the revised proposal receives more than two “disapprove” ratings, the student will be dismissed from the program.

### **Oral Qualifying Exam**

- 1) Upon satisfactory completion of the written proposal, the student will make an oral presentation of their proposal to all members of the Graduate Program in Pharmaceutical Sciences, both faculty and graduate students.
  - a) The oral exams will begin in September, with a date and time to be set by the Graduate Program Office and based solely on the availability of the Grading Committee. The Graduate Program Office will establish the time and date for each student to defend their oral exams. No rescheduling will be allowed, except under extreme circumstances (e.g. medical reasons). Any rescheduling must be approved by the Grading Committee.
  - b) The first part of the oral examination will be a 25-minute public presentation of the proposal. The student is expected to address any weaknesses of the proposal as identified by the Grading Committee in the summary statement.
  - c) Following the oral presentation, there will be a 5-minute public question and answer session, where faculty and students can ask questions. At the end of the public questioning, there will be a closed-door question and answer period involving only the student and his/her Grading Committee. While the proposal will serve as a starting point, questions may cover any topic that the grading committee deems appropriate. In this process, the student will have the opportunity to formally reply to reviewer comments in the summary statement. The student will be able to state their agreements or disagreements with the judgment of the committee, offering evidence to support his/her/their arguments. The length of the closed questioning session, is left to the discretion of the Grading Committee.
  - d) At the end of the questioning period, the student will be dismissed from the room and the grading committee will evaluate the student’s performance, rating it as “approve to advance to candidacy” or “disapprove to advance to candidacy”. The student is deemed to have passed the exam if there are no more than two ratings of “disapprove”. The findings of the Grading Committee will be immediately communicated to the student.
  - e) The oral exam will be counted toward one of the four seminars that are required for completion of the core curriculum.

- 2) Should a student receive three or more “disapprove to advance to candidacy” ratings, they will discuss the deficiencies with the Grading Committee.
  - a) The student will then schedule a re-examination with the full grading committee, to take place no less than two weeks and no more than four weeks from the date of the initial oral examination. At that time, a revised presentation will be followed by an open-ended question and answer period.
  - b) The re-examination will take place in private. The Graduate Program Advisor, upon consultation with the Grading Committee Chair, will appoint an observer, at the rank of Associate Professor or above, during re-examination. Should a student receive three or more “disapprove to advance to candidacy” ratings on the re-examination, they will either be dismissed from the program or given the option to petition to the Graduate Program Committee for entrance into the Master’s Degree Program in Pharmaceutical Sciences.

### **Admission to Candidacy**

1. Upon successfully completing the Oral Qualifying Examination, the Graduate Program Coordinator will submit a request for Admission to Candidacy form to the Dean of the GSBS in Lubbock.
2. All records will become part of the student’s permanent file in the Graduate Program Office.

### **Appendix 1. Format for the Written Qualifying Examination**

- 1) Each year, the Graduate Program Advisor will present information on how to write a grant proposal before the qualifying exam begins.
- 2) Students must use the following format to prepare their proposal
  - a) The proposal shall be no more than seven (7) pages, single-spaced, 11 point Arial font, ½ inch margins all around.
  - b) Specific Aims: This section should not exceed one (1) page and must contain background accessible to a scientist not in the research field, a brief statement of the main hypothesis and a description of the general approach to test the hypothesis incorporating two (2) specific aims.
  - c) Significance and Innovation: This section, not exceed two (2) pages, should provide background information necessary to help reviewers to identify why and how the student arrived at this hypothesis, the significance of this hypothesis in the understanding of a disease and/or how it contributes to the greater goal of the NIH in finding cures and therapies for human diseases, and the innovation of such proposal compared to the existing literature.
  - d) Approach: This section should not exceed the remaining number of pages left after completion of Specific Aims, Significance and Innovation sections of the proposal (six (6) pages maximum including the Significance and Innovation section). The student should separate the Approach section into two separate Aims. Each aim has to provide a rationale narrative followed by an appropriate number of experiments to address each specific aim. While the description of methodology need not be exhaustive, it must contain enough detail so that the committee is able to evaluate the student’s level of facility in experimental design. Each experiment must be accompanied by a statement of how the data will be analyzed, a statement of anticipated results as well as anticipated limitations and/or pitfalls.
  - e) Not included in the maximum 7-page limit:
    - i) A list of all literature referenced in the proposal, cited using EndNote citation manager and using the “Numbered” citation style (built-in within the software).
    - ii) Justification of human subjects and/or vertebrate animals (1 page maximum): The student should follow the same instructions to prepare an R21 NIH grant.

## **Master's Qualifying Exam**

Graduate students pursuing a Master's Degree in Pharmaceutical Sciences will not be administered a Qualifying Examination. They will be admitted to candidacy upon the completion of the core curriculum for the master's program.