committee. This is an important step in the comprehensive mentoring process where professional development and career planning are achieved in conjunction with completion of the degree.

The development and implementation of the IDP is an interactive and iterative process that continues to mature throughout the student's time in the program. For complete details please see the Individual Development Plan Guidelines.

Qualifying Exam

The student will be permitted to take the qualifying examination after they have completed the courses required in the relevant Track. The Advisory Committee should be formed and officially appointed no later than the point at which 18 credits hours of graduate work have been accumulated. Qualifying exams can be taken no earlier than one academic year after the official formation of the Advisory Committee. Exceptions can be made for students transferring into the program. Permission to schedule a qualifying exam should be requested by the student at their annual Advisory Committee meeting. The student should prepare a list of courses and grades received for all of their graduate work. The DGS will ensure that the relevant Graduate Program Core courses are completed. **Graduate students in the Pharmaceutical Sciences Graduate Program (PhD) will be required to take the Qualifying Exam during the summer before the start of the student's 5th semester in the program (at close of regular fall registration).**

Step by Step

1. Intent of Examination
   a. To answer the question "Is the student ready to begin PhD-level work?"
   b. NOT to judge the project
2. Graduate School requirements
   a. Student must have completed four semesters (36 credit hours) in the PhD program or completed a master's degree from an accredited U.S. institution and 2 semesters (18 credit hours) in the PhD program
   b. Must have a grade assigned to all completed courses—*have Graduate Program Operations Director submit Grade Change form to update previous "S" grades*
3. Steps to get the process started
   a. Have Advisory Committee approval for student to sit for examination--*have an Advisory Committee meeting*
   b. Settle on dates for Written Questions to be given to student (See Part 4.b.)—this should be in the month preceding the possible oral exam date. *Notify Graduate Program Operations Director*
   c. Settle on date for Oral Portion of Examination. The qualifying exam must be taken during the summer before the start of the student's 5th semester in the program (at close of regular fall registration).
   d. Student must login to their personal page on the Doctoral Degree Candidate Forms website https://ris.uky.edu/cfdocs/gs/DoctoralCommittee/Selection_Screen.cfm. The student should complete the Qualifying Examination Request Form online and submit to the DGS for approval two weeks prior to your oral qualifying examination date
   e. Grad School will return to Graduate Program Operations Director an AUTHORIZATION-TO-TAKE-EXAM card – *they will give it to your mentor on the day of the oral exam*
   f. MUST have all members present for whole examination
4. Format of Examination

a. Three parts: Written Questions, Written Proposal, and Oral Examination
b. Written question(s) submitted by each committee member to Graduate Program Operations Director
c. Written Proposal
    i. NIH style research proposal. See format rules below and c*heck with your mentor and advisory committee for any unique format and page limits that they wish to impose.*
    ii. Goal—to assess if the candidate can identify a worthy research problem, formulate a hypothesis and design experiments to test that hypothesis
    iii. You can use your current research project, but must show independence from your mentor
    iv. Provide written proposal to committee members **two weeks** prior to oral examination
d. Oral portion
e. Must pass all 3 portions to advance to candidacy

5. Results/Consequences
    a. Following successful completion of the qualifying exam, the student is required to register for 2 credit hours of PHS/PPS 767 every semester until they have completed and defended their dissertation. These 2 credits will constitute full-time enrollment. If a the student is required by the advisory committee to take additional course work that semester (such as a course that is offered only every other year) they must consult the DGS before registering for that course, as this will cause tuition costs to be greater (see important tuition scholarship information in this document).
    b. If the student does not pass the qualifying exam before the beginning of the 5th semester, the UK Graduate School permits registration in PHS / PPS 757 for two credits only once. If the students does not pass the qualifying exam during the semester they are registered for 757, they must enroll in 9 credit hours the following semester.
    c. If the qualifying exam is failed, the minimum time in between examinations is four months. The second examination must be taken within one year after the first examination. A third examination is not permitted. The committee will determine if the student must re-take the entire exam (written, oral) or just individual parts.
    d. Support for tuition covers a maximum of 4 semesters at the full 9 credit rate. **Students are expected to take their Qualifying Exam during the summer before the beginning of the 5th semester.**
    e. Failure to pass the qualifying exam may result in termination of the research assistantship which includes the tuition scholarship.
    f. See Tuition Policy Statement for exceptions to these policies.

Written Questions

The written examination will be composed of questions designed to evaluate the student's understanding and competence of the specialty area within pharmaceutical sciences in which the student anticipates conducting their dissertation research. The time frame for the written exam is decided during a meeting of the Advisory Committee or by email/phone communication between (and initiated by) the student and committee members.

The graduate student should notify the Graduate Program Operations Director of the week the committee has designated for the written exam. The Graduate Program Operations Director will contact the committee by email to confirm the dates for the written exam and to request that questions (along with stipulations, such as open book vs. closed, time limits) be emailed to the Graduate Program Operations Director by the Friday prior to the start of the exam week. The Graduate Program Operations Director will

contact the student as questions are received to relay the stipulations (ex. Dr. Smith sent closed book questions with a 4 hour time limit). The student will notify the Graduate Program Operations Director of the days/times the student prefers to take each part of the exam. The Graduate Program Operations Director will reserve rooms for closed book questions. The graduate student will return their answers to the Graduate Program Operations Director. A copy will be retained for the student file and the original delivered to the committee member who provided that question for grading. Committee members grade questions as pass-fail at the PhD level and notify the major professor of the results. Each Committee Member completes the Qualifying Examination Performance Evaluation (Written Component) Form. The Major Professor relays results to student and confirms approval to take the oral exam. The committee members bring the graded written portions to the oral exam and can bring up points for clarification.

NIH-style proposal

The student will prepare a research proposal prior to beginning the written questions portion of the examination. The student and their Major Professor will determine the topic for the research proposal. *For CET students, one of the Aims should address a clinical hypothesis.* The research proposal must develop one or more hypotheses that involve unique ideas that the student presents and tests in the proposal and that the student is able to defend in the oral examination. The student **must not plagiarize** the mentor's grant applications or publications. The format of the proposal will be an abbreviated NIH grant (see below). The students should distribute copies of the proposal to each Advisory Committee member **before** taking the written questions, and no later than **two weeks** in advance of the oral examination. Advisory Committee members will review the proposal for evidence that the student has learned the scientific method including identification of the aims of the research, generation of the hypotheses to be tested and proper testing of the hypotheses. The Advisory Committee's review of the proposal will focus on the student's mastering of the scientific method, not the specific research to be conducted.

Written Project Proposal Format

The qualifying exam grant should be written using the NIH Guidelines for a Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellows (Parent F31).
https://grants.nih.gov/grants/guide/pa-files/pa-19-195.html

Specific Aims (one page)

State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved. List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.
Note: *For CET students, one of the Aims should address a clinical hypothesis.*

Research Strategy (no more than 6 pages total)

Organize the Research Strategy in the specified order using the instructions provided below. Start each section with the appropriate section heading — Significance, Innovation, Approach. Cite published experimental details in the Research Strategy section and provide full reference details. Include information on preliminary studies, if any. Preliminary data can be included within any of the sections listed below (included in the 6 page limit).

(a) Significance

1. Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
2. Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
3. Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

(b) Innovation (this section is optional)

1. Describe the ways in which the proposed work challenges current research or clinical practice paradigms, or uses novel concepts, approaches, methodologies, instrumentation, or interventions.

(c) Approach

1. Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Include how the data will be collected, analyzed, and interpreted as well as any resource sharing plans as appropriate.
2. Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
3. If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high risk aspects of the proposed work.
4. Point out any procedures, situations, or materials that may be hazardous to personnel and precautions to be exercised.
5. Include any courses that you plan to take to support the research training experience.

Preliminary Studies

Include information on preliminary studies, if any. Preliminary data can be included within any of the sections listed above.

Literature Cited

List the most relevant literature cited in the proposal. This section is not included in the page limit.

Oral Examination

The oral examination will evaluate the student's familiarity with literature in the specialty area in which the student anticipates conducting their dissertation research, skill in the recognition of meaningful questions for investigation, ability to design experimental protocols and ability to communicate effectively. Committee members may also ask questions related to the written questions portion. The student will defend the mini-NIH format research proposal. Committee members are encouraged to meet at the beginning of the exam to identify the issues and questions to be pursued in the oral examination. Each Committee Member will complete the Qualifying Examination Performance Evaluation (Oral Component) Form.

University of Kentucky – Pharmaceutical Sciences Graduate Program
Qualifying Examination Performance Evaluation (Written Component)

Student: _____Major Professor: _____ Track: _____

Advisory Committee Member (please print): _____

Please check each box where appropriate:

	Outstanding *(Consistently exceeds expectations.)*	**Satisfactory** *(Meets Expectations)*	**Needs Improvement** *Marginal performance that falls below expectations.)*	**Unsatisfactory** *(Falls unacceptably below expectations.)*
Content Area	☐ Demonstrates mastery of knowledge base relevant to content area.	☐ Has appropriate understanding of content with few areas identified in need of improvement. Very few errors.	☐ Understanding of content falls slightly below expectations. Several errors were made, and multiple areas identified that are in need of improvement.	☐ Has little to no understanding of content area. Many content errors.
Organization	☐ Highly logical thought process. Coherent and well-developed paragraphs and transitions. Well-organized content.	☐ Logical and developed thought process. Appropriate paragraph structure and transitions. Minor organizational issues.	☐ Logical yet underdeveloped thought process. Organization of paragraph structure in need of improvement.	☐ Underdeveloped and illogical thought process. Poor organization of paragraph structure with no transition.
Writing Style	☐ No Grammatical or spelling errors. Writing Style very clear and fluid. Precise syntax. Appropriate tone with regard to content and audience.	☐ Few to no grammatical errors. Overall clear syntax and style. Appropriate tone with regard to content and audience.	☐ Occasional grammatical errors. Some awkwardness with syntax and style. Tone at times inappropriate with regard to content and audience.	☐ Many grammatical errors and problems with syntax. Writing style awkward and distracting. Inappropriate tone with regard to content and audience.

Does this student exemplify the quality of work you expect of a graduate student? ☐ YES ☐ NO
(if No, please elaborate)

Please Check one:

☐ ***Pass*** *(student should continue to the oral portion of the QE)*
☐ ***Fail***

Comments:

Faculty Evaluator: _____ Date: _____

University of Kentucky – Pharmaceutical Sciences Graduate Program
Qualifying Examination Performance Evaluation (Oral Component)

Student: _____ **Major Professor:**_____
Track:_____

Advisory Committee Member (please print): _____

Please check each box where appropriate:

	Outstanding *(Consistently exceeds expectations.)*	**Satisfactory** *(Meets Expectations)*	**Needs Improvement** *(Marginal performance that falls below expectations.)*	**Unsatisfactory** *(Falls unacceptably below expectations.)*
Presentation of material and preparedness	☐ Student demonstrated outstanding command of knowledge in material discussed.	☐ Student demonstrated command of knowledge appropriate and expected for their level of training.	☐ Student command of knowledge slightly below appropriate for their level. Some misunderstanding evident.	☐ Very little preparation if any. Student did not understand material discussed.
Critical Thinking	☐ Student demonstrated application of critical thought or scientific reasoning beyond expected student level during discussion. Very organized and logical thought process. Able to field questions thoughtfully.	☐ Student demonstrated application of critical thought or scientific reasoning during discussion. Somewhat organized and logical thought process. Able to field questions.	☐ Student demonstrated some application of critical thought or scientific reasoning but not at the level expected. Unable to field some questions asked. Student at times seemed unable to organize thoughts.	☐ Student did not demonstrate any application of critical thought or scientific reasoning during discussion. Unable to answer most questions. Unable to organize thoughts.
Oral Communication	☐ Student spoke effectively and used appropriate body language. Articulated thoughts very effectively.	☐ Student spoke effectively and used appropriate body language. Able to articulate thoughts.	☐ Improvement needed with public speaking. Showed nervousness in speech and body language. At times had difficulty articulating thoughts.	☐ Poor public speaking. Unprofessional language (too many 'ums', 'you knows') Poor presence. Unable to articulate thoughts.

Does this student exemplify the quality of work you expect of a graduate student? ☐ YES ☐ NO
(if No, please elaborate)

Please Check one:

☐ ***Pass with Confidence (No reservations. Exceeds expectations in all areas)***
☐ ***Pass*** *(please elaborate on any areas that may need improvement)*
☐ ***Fail***

Comments:

Faculty Signature: _____ **Date**: _____