Track has its own journal club requirements—please refer to the Required Coursework section above for details.

Individual Development Plans

Individual Development Plans (IDP) will be completed by each graduate student after identifying a major advisor. The mentor and mentee will undergo the initial IDP creation process prior to the student's first committee meeting. IDPs serve as a mechanism for students and their mentors to identify career goals and develop specific plans for projects, graduate study, and professional development to assist in achieving these goals. The IDP is a basis for communication between the student, the mentor, and the 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. **Students are expected to take their Qualifying Exam during their 5th semester of study.**

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. For the semester in which the Qualifying exam is planned, the student should register for PHS/PPS 767- Dissertation Residency credit, for 2 credits. The qualifying examination can be taken at any time during the semester
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. If you are planning to take the exam for the Fall semester, register for 2 credit hours of PHS/PPS 767. If you are not planning to take any other courses that semester, these 2 credits will constitute full-time enrollment, and will cost only the tuition for 2 credits. If you wish to take additional course work that semester (such as a course that is offered only every other year) speak with your mentor and the DGS before you register for that course, as this will cause your tuition costs to be greater (see important tuition scholarship information in this document).
   b. If you pass, you thereafter continue to enroll in PHS/PPS 767 every fall and spring semester, for 2 credits, until you have completed and defended your dissertation. The Department or your mentor will pay the tuition for credits up to a total time in the program of 10 semesters. After that time, you must find a way (you or your mentor) to pay this tuition.
   c. If the qualifying exam is failed, you can retake it after 4 months (one time).
      i. Registration in PHS/PPS 767 must be removed and replaced with 2 credit hours of PHS/PPS 790 as soon as the semester is over.
      ii. Your committee will determine if you must re-take the entire questions/proposal/oral, or just individual parts.

d. Department support for your tuition covers a maximum of 6 semesters at the full 9 credit rate. **Students are expected to take their Qual during their 5th semester.**
e. Do not put off the Qual until your 6th semester, for if you fail, then you or your mentor will have to pay the full tuition.
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.

The Final Examination (Dissertation and Defense)

This program operates within the purview of The Graduate School of the University of Kentucky. The Bulletin of the Graduate School should be consulted for guidelines and requirements applicable to all graduate students, and can be found at the following link.
http://bulletin.uky.edu/index.php

The Doctor of Philosophy Degree
The PhD degree is intended to represent the demonstration of independent and comprehensive scholarship in a specific field. Such scholarship must be manifested by both the student's mastery of subject matter and capacity to do research. The degree of Doctor of Philosophy is conferred upon a candidate who, after completing graduate work devoted to study of a special field of knowledge, (1) passes comprehensive examinations in the chosen field and the dissertation subject, (2) presents a satisfactory dissertation, and (3) shows evidence of scholarly attainment.

PhD Dissertation
The most important experience in the education of a graduate student is the completion of a PhD dissertation. Each student must present a dissertation that represents the culmination of a major research project. The dissertation must be a well-reasoned, original contribution to knowledge in the field of study and should provide evidence of high scholarly achievement. The Major Professor is the primary source of guidance in the planning and preparation of the dissertation. However, other members of the Advisory Committee may be involved in the process as well. All core members of the Advisory Committee must have the opportunity to read a near-final draft of the dissertation prior to signing the Dissertation Approval Form. The student must submit the dissertation to the Advisory Committee at least 4 weeks in advance of the defense date to allow the Advisory Committee sufficient time to review the dissertation prior to signing the Dissertation