PhD in Toxicology and Environmental Health - MIAEH

Comprehensive Examination and Admission to Candidacy Requirements

The exact timeline for initiating and completing the comprehensive exam will be agreed upon by the student and advisor in consultation with the program of study committee. For example, students entering the program with a relevant Master’s degree may initiate the exam as early as the end of the second semester if appropriate, whereas for those without a Master’s degree (or a Master’s degree with limited fit with the doctoral program) the end of the fifth semester may be more appropriate. The examining committee for their comprehensive exams must consist of a minimum of four Graduate Faculty members, three of whom must be full members of the Graduate Faculty in MIAEH and one committee member who must have a primary appointment outside of MIAEH. The student’s primary advisor will automatically be in committee and will serve as chair. The format of the written qualifying examination will be set in coordination with the University System of Maryland Program in Toxicology steering committee and may consist of a) written questions from the examining committee, OR b) direction of the student to write an NIH R01-like research proposal (recommended) on a topic that will not be part of the dissertation research.

NIH RO1 approach: If the format of the exam is an NIH R01-like research proposal, the following process will take place. This activity provides an assessment of the student to independently generate a research proposal, thus the student should not seek help from anyone during this process. There are two components, a Written and an Oral. Decisions at each stage are based on the majority agreement of the committee.

Written Exam

The student will initiate a research idea in the form of a 350 word abstract on a topic that can be closely aligned to, but not identical to, the student’s likely dissertation research. For example, if the student's program of study/dissertation research focuses on immunological techniques, the proposals should not be in the field of epidemiological methodology and vice versa. Thus, it is important that the abstract would use similar skills and related topics to the student’s final dissertation research.

These research ideas should include Title, Background, Hypothesis, Approach, and at least two main Aims. The advisor and student, in consultation with the examination committee, will agree upon an official start date for the research idea development. The student will submit an initial draft of an abstract to the committee within two weeks. The committee will take one week to vote on both: a) whether this topic is suitable, and b) the abstract format and study approach is acceptable. If no revisions are needed, the committee members proceed with the steps below. If revisions are needed, the student shall submit revised abstracts no later than two weeks after the feedback is provided, the committee again has one week to review and then advise the student to proceed with the steps below.

Once the abstract is approved, the student will have a maximum of six weeks to complete the NIH R01-like research proposal in accordance with NIH guidelines. However, it will not be required for the student to include preliminary data in the proposal. The preliminary data section of the proposal can expand upon supporting data in the published literature, as well as the expertise of the proposed research team. The student will not be able to seek the advice/recommendations of other people (i.e., statisticians, epidemiologists) during the six weeks of writing.

After six weeks, the student will submit the proposal to the committee and the committee members will have two weeks to provide feedback. Feedback can be in four different forms.
(1) Pass at the Ph.D. level, where the student has satisfied the written qualifying requirements at the Ph.D. level and continues on to the oral portion of the qualifying exam.

(2) Revise and resubmit, where the student must make revisions suggested by the committee and resubmit the exam within **four weeks**.

(3) Pass at the M.S. level, where the student has satisfied the written qualifying requirements at the M.S. level and continues on to the oral portion of the qualifying exam.

(4) Fail.

**Oral Exam**

The oral portion of the examination will take place no earlier than 15 days after the written examination or research proposal has been deemed satisfactory by the committee. The oral qualifying examination will be based on the content of the written examination or NIH R01-like research proposal and other questions related to the topic covered in the core courses and the student’s area of specialization. The exam will consist of a short presentation by the student followed by a series of questions from the committee. The oral qualifying examination will be graded as follows: Pass Ph.D. level; Pass M.S. level; or Fail. A repeat will occur within two weeks if needed; the exam may **only** be taken twice if the first attempt is not successful.

**Candidacy**

After passing the written and oral examinations, at the Ph.D. level, the student will be admitted to candidacy and the examining committee will typically serve as the dissertation committee. The candidate will then write a dissertation research proposal in the form of an NIH R01-like research proposal in consultation with the committee, submit the written proposal to the committee at least two weeks prior to a scheduled oral defense of the proposal, and finalize the proposal following the oral defense. During the course of the research, the candidate will meet with the committee at least once every six months and the advisor/chair will submit a progress report, signed by all committee members, to the MIAEH Graduate Director following each meeting. The final Ph.D. dissertation shall contain a minimum of three chapters containing complete manuscripts published or submitted for publication to peer-reviewed scientific journals prior to the final dissertation defense, together with such introductory, summary, and supporting materials as deemed appropriate by the dissertation committee. The procedures for the dissertation defense and examining committee are as specified in the Graduate School Catalog.

The committee is strongly encouraged to appoint a Deans Representative as early as possible in the process. This can be as early as the initiation point of the Qualifying Exams, and highly recommended to be in place once the student reaches candidacy. The Deans Representative can be voting or no voting, but this should be established at the outset. The Deans Representative should be outside of the tenure home of the advisor. Further details can be accessed from the Graduate School.
# see text for possible outcomes.  * only one revision is allowed for each section with “revise if needed”