

QUALIFYING EXAM EXPECTATIONS FOR AMCB STUDENTS

The qualifying exam is required for formal admission as a PhD candidate. The qualifying exam must be completed within seven semesters of starting a program (end of the second year). The qualifying exam is comprised of a written and oral component. The format of the qualifying exam should be formalized by the student with their supervisory committee. The qualifying exam should be designed to test a student's ability to think in a scientific manner, engage in an intelligent scientific dialogue with other scientists and to evaluate a student's breadth of knowledge in their chosen field of study. The qualifying exam will be undertaken in one of two formats chosen by the student along with guidance from the supervisory committee; 1) a traditional written and oral exam, or 2) a grant proposal followed by oral examination. The length and content of the exam is determined entirely by the supervisory committee. Best practice would dictate that a supervisory committee meeting be held prior to the qualifying exam. The qualifying exam should not be confused with a regular committee meeting and/or update on progress. UF regulations can be found [here](#).

Traditional exam: The traditional written and oral exam should consist of a series of written questions provided by the supervisory committee. Written examinations can be performed at the discretion of the supervisory committee prior to the oral examination. The oral examination should test a student's capacity for scientific rigor in addition to allowing the student the chance to expand upon or clarify components of the written exam. The student should schedule each committee members written portion of the exam after consultation and ensure the oral examination is scheduled within two weeks of completing all written exams. It is strongly encouraged that the student engages with each member of the supervisory committee to seek guidance on the style and type of question to expect, in addition to follow up after the completion of the written exam prior to the oral examination.

Grant proposal: The grant proposal should adhere to a formal grant structure including page limits and formatting as those indicated by specific USDA, NIH, or NSF grant types (see below for examples). The grant proposal does not require additional information normally provided in grant submissions (equipment, budget etc), but should include the scientific portion of the grant (e.g., Project Narrative). The goal of the grant writing examination is to test the student's scientific rigor, experimental design, scientific imagination, and independence, as well as develop grantsmanship skills. Suitable ideas for grant proposals should be discussed with the supervisory committee but should be novel scientific ideas that can be considered an extension of the research program or completely independent. The student will be expected to develop scientific ideas with testable hypotheses and executable experiments to test these hypotheses. It is expected that while the student constructs the grant, the supervisory committee will participate in refining the grant during the writing process to enable the development of grantsmanship skills. The completed grant proposal will be submitted to the supervisory committee seven days prior to the oral examination. The oral examination will be a critical evaluation of the grant proposal by the supervisory committee and any additional materials the supervisory committee justifies. Students may consider enrolling in a grant writing course prior to starting the grant proposal.

Please review current guidelines for specific grant applications. Below are some current (2023) guidelines that could apply to the written exam as a grant proposal:

Standard USDA-NIFA - *Project Summary* (250 words) and *Project Narrative* (18 pages plus bibliography). Projective Narrative should include the following sections: Introduction, Rationale and Significance, Approach.

USDA EWD postdoctoral - *Project Summary* (250 words) and *Project Narrative* (10 pages plus bibliography). Projective Narrative should include the following sections: Overview, Approach, Education Environment, Project Evaluation and Reporting, Expected Outputs (Expected Outputs table does not count against the ten-page limit of the Project Narrative).

NIH R01 - *Project Summary* (30 lines), *Specific Aims* (1 page), and *Research Strategy* (12 pages plus bibliography). Research Strategy should include the following sections: Significance, Innovation, Approach.

NIH F32 Postdoctoral grant - *Project Summary* (30 lines), *Specific Aims* (1 page), *Applicant Background and Goals for Fellowship Training* (6 pages) and *Research Strategy* (6 pages plus bibliography). Research Strategy should include the following sections: Significance, Innovation, Approach.

NIH K99/00 Pathway to Independence - *Project Summary* (30 lines), *Specific Aims* (1 page), *Candidate Information, Goals for Career Development and Research Strategy* (12 pages plus bibliography). Candidate Information, Goals for Career Development and Research Strategy should include the following sections: Applicants Background, Career Goals and Objectives, Plan for Career Development, and Research Strategy (Significance, Innovation, Approach).

Resources for grant writing:

USDA grant guidelines: <https://www.nifa.usda.gov/afri-request-applications-resources>

NIH general guidelines: <https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/write-your-application.htm>

NIH F32 guidelines: <https://grants.nih.gov/grants/guide/pa-files/PA-21-048.html>

NIH K99/00 guidelines: <https://grants.nih.gov/grants/guide/pa-files/PA-20-188.html>

University of Florida grant writing courses: <https://www.ctsi.ufl.edu/education/grant-workshops/grant-writing-graduate-courses/>