

DEPARTMENTAL PRELIM EXAM GUIDELINE

The following is our guideline to help you prepare for your Preliminary Examination. You should also look at the <http://www.gradschool.duke.edu/Regulations/doctoral.htm> for the Graduate School rules. It is also very important for you to work closely with your advisor and your committee as they will evaluate your performance.

The doctoral preliminary examination is an important milestone in your graduate academic career that assesses your ability to conduct doctoral research by demonstrating technical competence; critical thought and writing; and the ability to generate a plausible, relevant, and rigorous research plan. The exam must include written and oral components. The timing of the exam should be sufficiently early so that a change in strategic direction will not result in significant lost effort.

The written component assesses your ability to prepare a cogent scientific argument. It includes five key components:

- 1) A literature review from which your key hypotheses and experimental design are justified;
- 2) A list of hypotheses, specific aims or design objectives proposed for study;
- 3) A detailed methodology by which the hypotheses or designs are to be tested;
- 4) Preliminary data that demonstrates your ability to conduct the type of research that you are proposing; and,
- 5) A timeline with your best estimate of how long it will take you to complete the proposed work.

The written proposal has no Departmental specification for length or format requirements. The written proposal must be sufficiently detailed that each of the above areas can be fully evaluated by the Committee prior to the oral examination. By contrast, the written document should not provide a comprehensive review of all literature or all basic scientific background (e.g. relevant anatomy). Appropriate citation of published literature is more than sufficient. We encourage you to keep the body under 25-30 pages not including references or appendices. The written proposal should also be confined in scope to your proposed research area and not include all of your prior accomplishments in graduate school. In some research groups, students prepare the document in the form of a grant proposal, however, this is not a requirement. It is important to discuss the expectations for the examination with your advisor.

Following completion of the written proposal and distribution of the document to the committee at least one week prior to the oral examination, the oral component assesses your competence in technical areas including prior coursework, knowledge relevant to your proposed research, and broad understanding of the scientific method. It also assesses your understanding of your proposed research and why the proposed research is the most appropriate plan given the current

state of scientific understanding and available resources. Finally, it assesses your ability to respond to questions with rational and considered answers founded in the scientific method.

The outcome of the oral and written examination (pass or fail) must be determined at the time of the oral examination. Also determined at the time of examination are revisions to your proposed research plan. This revised plan serves as a set of guidelines for completing your Dissertation. While the natural course of your subsequent research trajectory may deviate from this plan, significant deviations should be discussed with your committee on an ongoing basis throughout your graduate education.