

PhD candidacy exam report, as written in the Calendar:

“The written report is a proposal based on the students own research which should include (i) pertinent background & literature survey , (ii) a summary of recent results and (iii) future directions and goals of the research, including methodology, outcomes, possible pitfalls, and impact of the work. The proposal should be approximately 4,000-5,000 words (excluding references), and contain figures and references as appropriate.”

Additional information/advice for student and for committee members

The point of a proposal is to ***explain what you want to do, why you want to do it, and how it is important in the field.*** A well-written proposal - and a successfully candidacy report - should make it clear to other readers that the work is (i) worth doing and (ii) has a reasonable chance of success.

A proposal needs to provide a context for the work (background/literature survey), a (brief) presentation of recent progress and a plan for near-term work. A rough guideline for how to partition the proposal into these three major sections:

Introduction/background/literature	~ 25%
Recent progress	~ 25%
Proposed work	~ 50%

The main point here is that the proposal needs to constitute the majority of the prose. If proposed work is substantially less than half of the report, it will read less like a proposal and more like a review or report. The end of the introduction section should articulate clearly the long term objectives of the proposed work.

Here is a list of questions that your proposal should address (but don't actually put these as section headings in the proposal):

What field(s) of research is the proposal pertinent to?

What is the state of the art in your field?

Why is the area important?

What are the long term goals of the research? (i.e. beyond the specific work you are proposing over the next few years. Think big here!)

What are the short term goals/plans and how do they relate to the long term goals?

Is your work original, innovative? How?

How does this research compare to what others in your field are doing? How is it distinctive, or more efficient, or more practical – what gives your work a competitive advantage over others?

Why should a funding agency support your work rather than your competitors'?

What would success of the proposed work mean (implications/significance)?

How will the work be carried out? (techniques, experiments, analysis)

Why do you think the work has a good chance of success?

What are some possible pitfalls of proposed work? How can these be addressed?

What is the sequence the experiments will be done? A timeline may be helpful to organize the proposal so that the sequence is clear.