
We recommend that students follow this format of sections in the preparation of their dissertation plan and that faculty committees use it as a jumping off for the oral exam.

**Background**

In replacement for the ESAC paper (terminated in 2011), we require a longer Background statement than might be in normal proposal, such as for a grant proposal – This should involve a succinct review (about 5 single spaced pages) that sets up the entire proposal. This section should discuss the major contributions in the area you are working as well as the competing views.

**Length of the Remainder of the Proposal:** Following the Background section, the length of the remainder of the proposal should be no more than 8-10 single-spaced pages, not including figures, figure legends, tables, and literature cited.

**Questions, Rational, and Significance**

This section should introduce the questions and hypotheses to be addressed in the dissertation. It should provide a concise statement of the goals and purpose of the dissertation work and its significance. This section should also address the dissertation's relationship to what is currently known and the brought up in the Background section. You should state at this point what some of the general expected outcomes might be should the research be successful and their logical interpretation and significance. If this dissertation is part of a larger collaborative effort in a lab you need to define your role in the group effort.

**The Research Plan and Design**

The Research Plan should discuss the general plan of effort. You must provide a clear explanation and sketch of experimental methods, forms of analysis, and technical procedures that will be used along with supporting references. You need to explain and justify these approaches. Among things that should also be addressed are:

- Do you need further training? Are these methods and expertise currently available in the department or university?
- It is very important to point out early on any potential problems, or alternative strategies. It would be nice to have some possible benchmarks for success that you might anticipate, and those points that might be considered forks in the road where different directions or emphasis may be entertained.
- Discussions with experts should be mentioned.
- If your research is in the early stages, describe any steps required to establish feasibility. What are any high risk aspects of the dissertation.

**Support for Dissertation Work**

What resources are presently available or likely to emerge? How might failure to garner support affect success in completing your dissertation? Discuss any needs for travel, materials, etc. Is this part of a larger collaborative effort in lab.

**Literature Cited.**

By this stage you need to have established a reference management system (e.g. Endnote, or Reference Manager). Provide an informative bibliography of all references cited in the proposal including background and methods (*recognize that in the oral exam you may be asked to elaborate on any of the cited work*). Do not embed reference numbers in the proposal. Each reference must include names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication.