Guidelines for the Dissertation Proposal

General Comments

With a doctoral degree, it is very likely that you will write proposals of one sort or another in your future employment, whether in industry or academia. Some of the elements of a good proposal are probably already familiar to you from writing journal and conference papers, or technical reports, or from assisting faculty members in their proposal writing. The dissertation proposal may represent your first exposure to writing a formal proposal. These guidelines are intended to assist you in this effort. A suggested proposal outline follows these introductory remarks and the formatting guidelines.

The proposal format will vary from setting to setting, but some general statements can be made. A well written proposal will concisely state the objectives of the work. It will also clearly place the intended work in the context of existing research in the field. It must make clear what exactly is new in what you propose. It will have a comprehensive reference list, with references from peer-reviewed sources. (Note: internet web site references, if not from reputable and well-known sources such as the IEEE, NASA, etc., can be questioned, and even discounted, so use them with extreme caution, and always provide a date.) Perhaps most importantly, the proposal must make a plausible, ideally convincing, case for the feasibility and significance of the proposed work.

Specifically for the dissertation proposal, build upon what you have done already. Do not be afraid to make “bold” claims, but be prepared to justify them, and at minimum, have a “back up” plan. You are being asked to think ahead, anticipate results both good and bad, and approximate a schedule. Know your subject, do your homework, and read voraciously in (and “beside”) your area. Finally, have a peer and your advisor review the document before you send to your committee.

Format

The required format is fairly simple. Adhere to the following requirements:

- All body text in Times Roman Font, either 11 or 12 point
- Title can be up to 14 point font, bold
- Single column, single spaced text
- Two line spaces between sections
- Bold font for section headings
- Maximum number of pages, including everything, is 25. There is no minimum number, but if the proposal is too “thin,” the work’s significance may come into question
- 1-inch margins all around
- Use italics for all variables, and any words for which you provide definition
- Title Page, with all the following items centered
  o Dissertation title
  o The words “a proposal presented to the faculty of the School of Electrical Engineering and Computer Science, Russ College of Engineering and Technology, Ohio University”
  o The words “in Partial Fulfillment of the requirements for the degree Doctor of Philosophy”
  o Your name
  o Date
- Reference list and citations should follow format of journals in your field
Ph.D. Proposal Outline

Dissertation Objective

This should be a concise statement of the problem, and your solution to it. It is similar to a journal paper abstract, but does not have all the definitive conclusions since you have not yet completed the work.

I. Introduction
   A. Background: here describe the setting of your work, the general trends in the field in your focus area, and how your problem topic fits in. Someone with a general EE/CS education should be able to follow this.
   B. Area overview: within many research areas, there are multiple techniques, and yours will likely be another one. Briefly compare the existing techniques or approaches for your problem, and highlight how yours differs, and what results may be obtained, what benefits gained.
   C. Scope: briefly cover the scope of your completed and uncompleted work as you envision it, then describe the contents of the remainder of the proposal.

II. Major Topic Area Discussion
   A. Model and Assumptions: a specific description of your problem setting, which in addition to text should include key diagrams and/or tables, and probably a few pertinent equations.
   B. Literature overview: cite and describe the most important references germane to your problem. This discussion need not be comprehensive, but the reference list should be. (Also note: the literature review in your dissertation MUST be comprehensive.) Here the review should be complete enough to cover all areas mentioned in Section I.B, with greater detail. In particular, note limitations or omissions of previous work, gaps your work may fill, and key extensions of existing concepts.
   C. Elaboration: if needed, this subsection (NOT entitled “Elaboration”) should provide more detail on the research area, in the form of illustrative equations or diagrams, and additional discussion of subtleties, complexities, and issues not previously mentioned, but which will help the reader understand where your work is aiming.

III. Completed Work
   A. Example results: self-explanatory. These should illustrate any claims made previously.
   B. Major findings: discuss key results to date, including any unsuccessful strategies and why they did not work. You should also discuss any new directions that look fruitful for exploration based upon these results (either expected or unexpected).

IV. Plan of Work Outline
   A. Major tasks and schedule: divide what you see as your remaining work into manageable “phases” or segments, and discuss briefly HOW you plan to address the tasks. Task phases are typically not longer than 6 months, nor shorter than 2 months.
   B. Alternative approaches: briefly discuss any “plan B” or “back up” options you may follow if the results do not turn out as anticipated. Describe HOW you will know when things are not working, and finally, HOW you will know you are done.

V. References: as comprehensive a list as possible