

# College of Science and Engineering

## Guidelines for a Thesis Proposal

### Overall:

The proposal should employ good grammar and proper sentence construction with correct spelling and punctuation. The proposal should be typed and well organized. If acronyms or very specialized words are used, a glossary of definitions should be available in the appendix. The proposal should be written as though the reader was a typical scientist or engineer and not a specialist on the topic of the proposal. Referenced publications or prior studies listed in the bibliography should be cited in the body of the proposal. (You should check with your advisor to determine which Style Manual is to be followed for your discipline).

Please note: your proposal should be thought of as being the initial stages of your final thesis, rather than as a paper separate from the thesis. Consider your proposal to be a preview of the organization and quality that will go into your thesis. Thus, effort put into the proposal should contribute directly to the final product, the thesis itself.

### Length:

There is no required minimum length, however the length should be sufficient to cover all the items listed below. Clarity and conciseness should be emphasized. Typical proposals contain between 6 and 20 pages.

### Contents:

In general, the following categories should be contained in the proposal:

1. A review of the background relating to the problem being addressed (e.g., know the concepts, methods or previous work relevant to the subject.
2. A clear statement of the problem, (i.e., what is to be explained or investigated? Why is the work being done? What are the objectives of the work? What benefits are expected?)
3. If a new or unusual approach is to be tried, reasons why it might be expected to succeed, particularly in contrast to other approaches that may have failed.
4. A clear statement of the work that is to be done. (e.g. What are you planning to do and perhaps what are others associated with the project planning to do? What are the details of the investigation? Is the work a simulation, the development of a model, theory, instrument or software, a statistical analysis of existing data, testing of an existing technique under new circumstances, or an experimental search for data to be generated in a laboratory or out in the field, etc.?) It is appropriate to consider (and include) a timetable of when various steps of the work are expected to be completed.

5. A description of the actual methods, instruments, materials, protocols, software or reagents that will be used in the investigation. This section should address whether all times needed for the investigation are available; if they are not, a plan for gaining access to such items or circumventing their necessity should be included.
6. A brief summary of possible outcomes of the work.

Example of Some Major Sections:

(**Note:** not all sections listed below may be useful or appropriate; alternatively, other sections not included here may be necessary).

1. Table of Contents
2. Abstract
3. Introduction and Background
4. Statement of the Problem
5. Details of the Proposed Investigation
6. Materials, Methods or Instruments to be Used
7. Summary
8. References (or Bibliography)
9. Appendices (e.g., Glossary, computer programs, etc.)