

Structure for your Final Submittal

The final deliverable for this course is a cohesive proposal for a project you would like to undertake. Ideally, this proposal may serve as the template for your research exit option if you are happy with the topic you have selected; otherwise, it should be a full scale, complete example of a topic or project you *could* pursue. You are not locked in to the topic you propose here, but your work should reflect a project that could be successfully and completely executed as an appropriate exit option for your graduate degree. By the time your committee approves your proposal, it should be absolutely clear to you what you must do to successfully complete your work, and you will have completed a large part of the background work you'll eventually include in your final exam, report, or thesis. All proposals should include the following sections:

Front Matter

Depending on the magnitude of your proposal, you will likely need to include a cover page and table of contents to orient the reader. Don't waste paper on this until the end, though.

Abstract/Executive Summary

Include an overview (no more than one page) of your proposal that focuses on your problem and its significance, provides a brief outline of your scope and approach, and highlights your expected outcomes and impacts.

Introduction/Background

This section or sections of the proposal should concisely describe the general problem you are addressing, along with statistics and evidence to support its significance. It should help the reader go from a broad problem with which they can identify to the smaller problem you hope to contribute to solving with your work. The Introduction should introduce the problem in general, and then the Background section should introduce your stakeholders, problem context, and any other general knowledge needed for the reader to understand how you are framing the problem. At the conclusion of this part of the proposal, a rhetorical question should be used as a transition to the literature review so that it's obvious what problem you're trying to solve.

Literature Review/Point of Departure

This section should provide a review of what others have done to address the problem and identify gaps that need to be addressed or opportunities that present themselves to improve the state of the art. This is your review of the literature and/or practice to establish the point of departure for your work. It should include any graphical maps or matrices of the literature that you have developed to support your work. It should conclude with a clear statement of gaps that exist and a statement of need your solution will meet.

Research Goal and Objectives

This section should clearly articulate the specific goal you hope to address within your scope of work, along with concise objectives that describe what your work will achieve if it is successful. This section may reiterate specific questions you will be addressing in your work, or if you are pursuing a more practical exit option, it should describe who the users are for your product, and what they will be able to do with it. This is the section where you should clearly establish the boundaries and scope of your investigation and the functional requirements for your solution. If you have created a graphical map or other figure to illustrate the playing field and relationships among players in your domain of interest, this is where the map/figure could go as a means of clarifying what is in and out of scope.

Research Design

This section should describe your overall research design and the major steps you will take to achieve the objectives of your work and/or answer your research question. It may include a discussion of the population you will study, hypotheses you will test, your variables and how you will measure them, your data collection choices and why they are appropriate, and your validation strategies. Somewhere in this section should appear a process diagram or flowchart showing the major steps of your research – a roadmap to its design. Ideally, it would be organized in parallel with the objectives from the previous section, and major tasks should be numbered so that you can elaborate on them in the next section.

Implementation Plan

This section of your proposal contains the nuts and bolts for how the work will get done. The best way to structure this section is by task, with each subsection beginning with the starting point for that task, and each subsection ending with the expected outcome of the task. The middle of each subsection should describe how the task will get done, and with what resources. It should include a schedule for your work that lists all the tasks, a table or description of required resources needed to complete the work, and milestones for interim and final deliverables. Be sure to include a task for preparation of final submittals, and a milestone for your final presentation.

Expected Outcomes, Contributions, and Impacts

This section should define the specific outcomes/deliverables you plan to create from your work, the contribution your work will make to the body of knowledge or practice, and the benefits and impacts your work will have on solving the problem you described in the beginning of the proposal. If you are attempting to answer a specific research question, your impacts should describe how the answer to your research question will enable the world to be a better place. If you are pursuing a more applied project, your impacts should be focused on how your useful outcome will benefit its user base or stakeholders. Remember to structure this section to appeal to your specific audience!

References

Include a formal and correct ASCE-formatted list of references cited in your work. Double check that all items in the references are cited in the text, and all references cited in the text are included in the reference list.

Annotated Bibliography

Include an annotated bibliography of the most relevant sources of information pertaining to your problem. Include a full ASCE-formatted reference for each item along with a short annotation about its contents and how it is relevant. At the M.S. level, this is typically about 10 references total.

Optional Sections

Depending on the audience for your proposal, it may be appropriate to include a short bio of you and/or the members of your research team or advisory committee. This enables readers to understand why you are a good candidate to complete the work and what qualifications, skills, and abilities you bring to the table. You may also elect to include letters of support from research partners, data collection instruments or protocols if you have pilot tested them, or other relevant supporting information. All optional sections to the proposal should be numbered or lettered and called out in the text. Depending on the length and scope of your proposal, you may also elect to include slip sheets or tabs in a bound copy to help the reader locate appropriate sections.