

Utah State University Civil and Environmental Engineering Department

MS Plan A and PhD Proposal Requirements

August 2024

As part of the requirements for completing a MS Plan A or PhD degree in the Civil and Environmental Engineering Department, students must prepare a research proposal. There are two objectives in preparing the proposal: 1) articulate the student's research plan; and 2) serve as an opportunity for the student to gain valuable experience in proposal writing, which is a necessary skill for success in academic and industry careers. This document provides requirements for MS Plan A and PhD students to prepare a research proposal.

Timing:

- MS Plan A students must submit and present their research proposal after their supervisory committee has been formed and after their program of study has been approved. The proposal must be approved by the supervisory committee at least one semester prior to the thesis defense.
- PhD students must submit and present their research proposal after their supervisory committee has been formed, after their program of study has been approved, and after they have completed the comprehensive exam. The proposal presentation must occur by the end of the second year. The proposal must be approved by the supervisory committee at least two semesters before the final dissertation defense.

Length and Formatting: The proposal should be no longer than the page restrictions listed in the Contents section below. Proposals should use a standard, single-column format for the text with no less than 12-point font, page numbers, and 1 inch page margins. Students should use the provided template for preparing their proposal.

Contents: At a minimum, the proposal should contain the following sections:

- **Title page:** The title page should provide the proposal title, student's name, and major professor and committee member names.
- **Project Summary** (1 page max): The project summary should consist of a thorough yet concise summary of the proposal. The project summary should succinctly summarize the research questions and objectives, intellectual merit, and potential impact of the proposed research.
- **Project Description** (15 pages max): The project description should address what the student wants to do, why they want to do it, how they plan to do it, and how they will know if they succeed. The project description should provide a clear statement of the work to be undertaken and should include research questions, hypotheses, and/or objectives for the proposed work and expected significance. It should also provide a description of the present state of knowledge in the field and how the proposed work builds upon or advances the current state of knowledge. The project description should provide a plan and timeline for the proposed work, including a description of the specific tasks/activities to be undertaken, and, where appropriate, a description of the experimental methods and procedures to be used. The project description should also contain a section labeled "Expected Results and Significance of the Proposed Work." Within this section, students should describe the expected outcomes or products of their proposed work and the engineering significance (e.g., who will be interested in the

work?, what are the specific applications or impacts of the work?, what will you know or be able to do after you complete your work that you do not know or cannot do now?). This section should also discuss the significance of the proposed activities. Significance may include advancement of scientific knowledge, production of significant products or innovations, improved well-being of individuals or society, and other societally relevant outcomes.

- **References Cited** (not included in page restrictions): The references section, as well as all in-text citations, should follow a professional style (e.g., ASCE, APA). Ensure that all references are cited, and all citations have a corresponding reference.
- **Data Management Plan** (2 pages max): The data management plan should include a description of the types of data (and/or other research products) that will be collected or generated and how they will be managed and preserved, documented, and shared. Plans should include how data will be collected, stored, and managed during the research as well as where finalized data products will be archived and published (i.e., a data repository). Data products may include model outputs, field observations, samples, physical collections, code or software, curriculum materials, or other research products. Any policies and limitations for data use and distribution (e.g., in the case of data involving human subjects) should be described. The data management plan should comply with the data management plan and requirements for the project on which the student is working, as is typical with projects funded by state and federal agencies.
- **Appendices:** In limited situations, one or more appendices may be used to present and communicate more detailed information that supports the proposal text and that would be useful for committee members to review, but would otherwise not fit within the page limits of the Project Description. Examples include detailed data collection and analysis protocols and survey or interview questions. Any appendices must be referenced in the Project Description.

Reporting Preliminary Results: It is appropriate and recommended to include some preliminary results in a proposal when those preliminary results motivate and justify the proposed research. This helps establish legitimacy of the planned approach. However, the purpose of a proposal is to present new ideas and a plan to see those ideas to completion, and to receive feedback and suggestions related to the plan. It defeats the purpose of the proposal for it to be late in the program when work is already substantially complete. This is the reason for requiring the proposal to be presented at least one semester before the thesis defense for MS students and two semesters before the dissertation defense for PhD students. Submitted proposals should be written as a proposal and should not include drafts of research papers or thesis/dissertation chapters. Generally, proposals should be written in the future tense for work to be done, describing what the student will do, not what they have done.

How and When to Submit: Students should consult with their advisor to plan their submission and to ensure their proposal is ready. Once approved by their advisor, students should submit their proposal electronically in an editable format (e.g., Microsoft Word) to their supervisory committee. Submission of an editable version facilitates electronic edits/comments by committee members. Proposals should be submitted to the committee at least 2 weeks prior to the planned proposal presentation date to allow adequate time for the committee to review the proposal prior to the presentation.

Proposal Presentation: Students must schedule an oral presentation of their proposal. The scheduled meeting should include a presentation (20-30 minutes for MS Plan A students, 30-40

minutes for PhD students) of the proposal to the supervisory committee, followed by a period during which the committee will ask any questions regarding the proposed research plan. Following the presentation and question/answer period, the committee may approve the proposal or require revisions and/or another presentation of the proposal. Where revisions are required, they should be clearly documented by the committee and provided to the student with a suggested plan and timeline for completion no later than one week following the presentation. Once the written and oral presentation of the proposal are approved, this is certified by the committee by electronically approving the appropriate form submitted for approval by the CEE Graduate Program Coordinator.

Use of Generative AI: Students should confer with their committee and refer to guidelines in the Graduate Student Handbook for information about use of Generative AI in preparing their proposals.

Exceptions: The department recognizes that there may be individual student circumstances that require deviations from or exceptions to this policy. For example, students on a non-traditional schedule may not be able to meet the timing requirements specified above. The student's supervisory committee may exercise judgement in these cases as to what is best for a particular student. Any deviations or exceptions to this policy must be approved by the supervisory committee and documented in a memo to the CEE department head, the appropriate program head, and the student.