

Capstone Project: The Thesis Option

Step 0: Start early

Your first responsibility is to select an on-campus thesis advisor who has expertise on the topic of your proposed thesis project. The advisor may be from any department at FSU. Select a topic or problem for your Capstone Thesis Declaration before you meet with a prospective advisor; meet and talk with many faculty before requesting that one serve as your advisor. You must secure an advisor's agreement to participate prior to developing your proposal. You and your advisor must complete and submit to the Environmental Science Program Coordinator a completed Capstone Thesis Declaration and Capstone Thesis Advisor Agreement.

Step 1: Complete and submit to the Program Coordinator the following documents:

1. Capstone Thesis Declaration
2. Capstone Thesis Advisor Agreement

Step 2: Prepare and submit your Capstone Problem Statement:

1. *Your problem statement should convince the reader that you have identified an interesting, testable, and tractable problem in environmental science, a problem with both scientific and policy aspects.*
2. Prepare the Problem Statement:
 - a. The Problem Statement is a brief, well-written, carefully referenced description of the hypothesis you wish to test in your thesis.
 - b. Begin with a brief introduction to the topic of your hypothesis.
 - i. Precisely describe why the problem is relevant to the field of environmental science and policy.
 - ii. Include citations to legitimate sources that demonstrate the problem's relevance.
 - c. Continue with a description of the hypothesis you wish to test. Describe
 - i. how will you test the hypothesis, and
 - ii. the likely outcomes of your tests.
 - d. Include at the end of your Problem Statement a "Works Cited" list.
 - i. You must cite sources for every idea, assertion, fact, and statement...
 - ii. you make in the Problem Statement that is not the result of your own work.
 - e. ***Any Problem Statement without a "Works Cited" list will be automatically rejected.***
 - f. Every student asks, "How long should the problem statement be?"
 - i. Recall Abe Lincoln's answer to the question,
 1. "How long should a man's legs be?"
 2. "Long enough to reach the ground."
 - ii. Recall Ben Franklin's note in a letter to a friend, "I would have written a shorter letter had I had more time."
3. Submit a draft of your Problem Statement to your advisor.
 - a. Follow the requirements on format, citation style, and other details your advisor requests.
 - b. Your advisor is *not* a copy editor. There should be no spelling or grammatical errors in the draft you submit to the advisor.
 - c. Rewrite your draft in light of your advisor's review.
4. Submit the rewritten Problem Statement via email by the appropriate deadline to
 - a. your advisor, and
 - b. the Program Coordinator.
5. Most likely, the Environmental Science Program Committee will request that you rewrite your Problem Statement.
 - a. Use this opportunity to rewrite the *entire* Problem Statement!
 - b. Submit the rewritten Problem Statement via email by the deadline to your advisor.

Step 3: Prepare and submit your Capstone Thesis Proposal

1. Your Thesis Proposal should
 - a. convince the reader that you have the means, ability, time, and knowledge to test the refined and precisely defined hypothesis you proposed in your Problem Statement, and
 - b. artfully and accurately combine science with policy to create a document that a scientist admires and a politician understands.
2. Conduct research on the problem you have chosen.
 - a. What work has been done on related problems?
 - b. What difficulties have others had investigating similar problems?
 - c. What policy issues surround the problem you are investigating?
 - d. Be bold—if you find a pertinent article, email or call the author and
 - i. ask her questions, or
 - ii. ask for suggestions.
3. Write the Thesis Proposal following this rough outline:
 - a. Introduction and background:
 - i. Begin by discussing the background of the problem you are investigating. Include
 1. scientific aspects
 2. policy aspects
 - ii. Discuss the hypothesis you will be testing, describing in detail
 1. the data you plan to collect,
 2. the manner in which you will analyze that data, and
 3. how all this work will enable you to test your hypothesis.
 - iii. Discuss work done on related problems, and their bearing on your hypothesis.
 - b. Objectively describe the significance of your proposed work.
 - i. What is the scientific relevance of the work to environmental science?
 - ii. What are the policy implications of the problem and its solution?
 - c. Project methodology: Clearly describe
 - i. the methods by which the data will be collected. Include
 1. proposed sample sizes and types
 2. type, nature, and availability of equipment
 3. proposed experimental, control, and confounding variables
 - ii. the type and quantity of data to be collected. For example:
 1. continuous data measured via instruments
 2. categorical data measured via survey
 - iii. the manner by which the data will be analyzed. For example:
 1. statistical analyses used to test your hypotheses
 2. comparisons or correlations to test your hypotheses
 - iv. Give a brief narrative schedule of your work so you know you can accomplish it all before graduation day.
 - d. Discuss the likely results of your study.
 - i. What are the scientific and policy implications of your work if your hypothesis is
 1. accepted?
 2. rejected?
 - ii. What other outcomes, if any, are possible from your work?
 - e. Project presentation and assessment:
 - i. Each candidate is expected to deliver
 1. an oral presentation and
 2. a written paper.
 - ii. Explain how you will present your results to the Program Committee, the FSU community, and the relevant local community.
 - f. Include at the end of your Thesis Proposal a “Works Cited” list.
 - i. You must cite sources for every idea, assertion, fact, and statement...
 - ii. you make in the Thesis Proposal that is not the result of your own work.
 - iii. ***Any Thesis Proposal without a “Works Cited” list will not be accepted.***

4. Everyone asks, “How long should the Thesis Proposal be?”
 - a. Recall Abe Lincoln’s answer to the question,
 - i. “How long should a man’s legs be?”
 - ii. “Long enough to reach the ground.”
 - b. Recall Ben Franklin’s note in a letter to a friend, “I would have written a shorter letter had I had more time.”
5. Submit a draft of your Thesis Proposal to your advisor.
 - a. Follow the requirements on format, citation style, and other details your advisor requests.
 - b. Your advisor is *not* a copy editor.
 - i. There should be no spelling or grammatical errors in the draft you submit to your advisor.
 - ii. The prudent student will have a friend or colleague proofread the draft prior to submission to your advisor.
 - c. Rewrite your draft in light of your advisor’s review.
6. Submit the rewritten Thesis Proposal via email by the deadline to your advisor.
7. Most likely, the Program Committee will request that you rewrite your Thesis Proposal.
 - a. Use this opportunity to rewrite the entire Thesis Proposal!
 - b. Submit the rewritten Thesis Proposal via email by the deadline to your advisor.

Capstone Thesis Grade Scheme:

40% to be determined by the Capstone Advisor, in the following manner:

- 5% for Proposal
- 5% for professional behavior
- 10% for Capstone Paper 1st Draft
- 20% for Capstone Paper 2nd Draft

60% to be determined by the Environmental Science Committee, in the following manner:

- 30% for Final Capstone Paper
- 30% for Final Capstone Oral Presentation