

Department of Biology

Graduate Thesis/Research Project Prospectus

The Prospectus has two important roles.

- 1) It serves as the second-level English Proficiency assessment required of all CSU graduate students.
- 2) It articulates the graduate student's research plan and progress and enables the student to receive constructive feedback from their graduate committee members.

Please be sure to meet with your research advisor for guidelines specific to your field of study.

Requirements

Prior to advancement to candidacy (but usually not earlier than the second semester), each student must write a prospectus for their thesis/research project.

- The thesis/research project prospectus should be at least 5 single-spaced pages and not more than 10.
- A timeline must be included that indicates when each section of the proposed work will be completed.
- A description of any preliminary work completed.
- Provide page numbers and relevant references.
- The thesis advisor shall determine the format of the prospectus.
- The prospectus must be written using standard 8.5" x 11" page size, 12-point, Times New Roman font OR 11-point Arial font, 1" margins on all sides, and must be single spaced or greater. References, figure legends, and footnotes may be a smaller font, no less than 10-point Times New Roman or Arial font.

Turning in the thesis prospectus:

The student should work in close consultation with her/his research advisor to write the thesis/research project prospectus. The research advisor must approve of drafts of the prospectus given to other committee members.

All three committee members are required to approve the thesis/research project prospectus. **Students must contact committee members at least one month prior to turning in the prospectus to the department.** This allows all individuals to schedule time to read the prospectus, give the student comments, allow the

student to address comments, and the committee members to re-review.

Download and complete the cover page that contains the thesis title, student's name, the names of the committee members, and the date.

- The prospectus is submitted your second semester prior to submitting your Advancement to Candidacy (ATC) and Culminating Experience (which are submitted your third semester).
- The deadline for fall semesters is generally the first week of October, and for spring the first week of March. **Students must submit their prospectus (two) semesters before they plan to graduate.**
- The prospectus is the template for the student's thesis, where information is added as work is completed.

Prospectus Format:

Below are general guidelines to follow, which can be modified in consultation with the advisor. It is advisable to use the following headers:

Name, Title, and Abstract page

Please state the **date**, your **name**, and the **title** of your thesis and include an **abstract**. The abstract should be less than 500 words.

Research Plan (that includes figures)

Background and Significance: This section should include key findings that lead up to your work. Please avoid an exhaustive review of the literature and instead focus on important papers in your field that put your work into context. The section should funnel information from broad to narrow. It should define information that sets up an important problem or unknown that you will address.

Impact Statement: This should be a short section that succinctly states what impact your studies will have on your field and the public. State what will be possible as a result of your studies that is not possible without them.

Hypothesis: A hypothesis is a statement about what will be learned about your topic of study based on your work. Please avoid posing questions or stating your expected results. Instead craft this based *on what specific knowledge will be gained* about your topic of study.

Aims: Consider experimental aims in the context of how much time you plan to be in your degree program. You can also instead consider posing questions to be addressed. Typically, 3 aims are reasonable. The aims should tie back to addressing your overall hypothesis. You can also pose a "working hypothesis" to set up each aim.

Research Design (each aim can be divided into sub-questions)

Specific Aim 1:

Each aim may be sub-divided into questions that address a part of the aim. Sometimes a short *rationale* may be introduced here to help justify the aim further.

Question 1

Explain the *experimental design*. This should be a summary that provides enough information for a committee member not in one's field to understand the proposed work. It should NOT be a detailed protocol. It is important to provide a description of relevant controls and reagents.

Explain the *expected outcome or result*. Explain potential pitfalls and alternative strategies to deal with such problems. If the work has been completed, preliminary results should be described.

State a short *conclusion*. How does this result answer the question?

When in the overall *timeline* of your project will this section be completed?

Question 2 (if needed)

Same format as Question 1.

Summary/Conclusion of the Aim

How do the expected results and the conclusions from each set of experiments address the aim and the hypothesis? How is the knowledge gap filled? Why is it significant?

Specific Aim 2 (if needed)

- Same format as aim 1.

Conclusions

Bring the reader back to the hypothesis? How will the completion of these studies move the field forward (include references)? What are the next steps?

References (not included in page count)

An Example Thesis Prospectus Outline
(use this to help you plan/organize your written thesis prospectus)

Title:
Student:
PI:

Abstract:
Key words:

Background/ Significance: (include figures if appropriate)
Impact Statement

HYPOTHESIS:

Specific Aims:
Aim 1:
Aim 2:
Aim 3:

Experimental Design

Aim 1:
Rationale:
Experiments:
Expected Outcomes: (include actual data)
Potential Problems:

Aim 2:
Rationale:
Experiments:
Expected Outcomes: (include actual data)
Potential Problems:

Aim 3:
Rationale:
Experiments:
Expected Outcomes: (include actual data)
Potential Problems:

Conclusion/Significance:
Future Directions
Literature Cited